=> fil capl; d que 120; d que 122; d que 127; d que 129; d que 130; s 120 or 122 or 127 or 129 or 130
FILE 'CAPLUS' ENTERED AT 11:48:11 ON 26 FEB 2002

FILE COVERS 1907 - 26 Feb 2002 VOL 136 ISS 9
FILE LAST UPDATED: 25 Feb 2002 (20020225/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

CAS roles have been modified effective December 16, 2001. Please check your SDI profiles to see if they need to be revised. For information on CAS roles, enter HELP ROLES at an arrow prompt or use the CAS Roles thesaurus (/RL field) in this file.

The P indicator for Preparations was not generated for all of the CAS Registry Numbers that were added to the CAS files between 12/27/01 and 1/23/02. As of 1/23/02, the situation has been resolved. Searches and/or SDIs in the H/Z/CA/CAplus files incorporating CAS Registry Numbers with the P indicator executed between 12/27/01 and 1/23/02 may be incomplete. See the NEWS message on this topic for more information.

L7	25954	SEA	FILE=CAPLUS ABB=ON	VACCINES/CT
L8	185519	SEA	FILE=CAPLUS ABB=ON	DNA+OLD/CT
L9	472503	SEA	FILE=CAPLUS ABB=ON	GENE#/CW
L10	87418	SEA	FILE=CAPLUS ABB=ON	DRUG DELIVERY SYSTEMS+OLD/CT
L15	98392	SEA	FILE=CAPLUS ABB=ON	CARRIER#/OBI
L16	135221	SEA	FILE=CAPLUS ABB=ON	GENOM?
L17	447	SEA	FILE=CAPLUS ABB=ON	L10(L)L15 AND L7
L18	9771	SEA	FILE=CAPLUS ABB=ON	(L8 OR L9)(L)L16
L20	3	SEA	FILE=CAPLUS ABB=ON	L17 AND L18

L7	25954	SEA	FILE=CAPLUS ABB=ON	VACCINES/CT
L10	87418	SEA	FILE=CAPLUS ABB=ON	DRUG DELIVERY SYSTEMS+OLD/CT
L11	309698	SEA	FILE=CAPLUS ABB=ON	METALS/CW
L13	1	SEA	FILE=REGISTRY ABB=ON	GOLD/CN
L14	165627	SEA	FILE=CAPLUS ABB=ON	L13 OR GOLD
L15	98392	SEA	FILE=CAPLUS ABB=ON	CARRIER#/OBI
L21	1100	SEA	FILE=CAPLUS ABB=ON	(L14 OR L11)(L)L15
L22	6	SEA	FILE=CAPLUS ABB=ON	L21 AND L7 AND L10

L4	196245	SEA	FILE=CAPLUS ABB=ON	VIRUS/CW
L5	22081	SEA	FILE=CAPLUS ABB=ON	HERPES?/OBI
L8	185519	SEA	FILE=CAPLUS ABB=ON	DNA+OLD/CT

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L9       472503 SEA FILE=CAPLUS ABB=ON  GENE#/CW
L11      309698 SEA FILE=CAPLUS ABB=ON  METALS/CW
L12       17238 SEA FILE=CAPLUS ABB=ON  KILOBASE#
L13           1 SEA FILE=REGISTRY ABB=ON  GOLD/CN
L14      165627 SEA FILE=CAPLUS ABB=ON  L13 OR GOLD
L16      135221 SEA FILE=CAPLUS ABB=ON  GENOM?
L26        1551 SEA FILE=CAPLUS ABB=ON  (L8 OR L9)(L)(L12 OR L16) AND (L4 OR
                L5)
L27           2 SEA FILE=CAPLUS ABB=ON  (L11 OR L14) AND L26


L4       196245 SEA FILE=CAPLUS ABB=ON  VIRUS/CW
L5        22081 SEA FILE=CAPLUS ABB=ON  HERPES?/OBI
L7        25954 SEA FILE=CAPLUS ABB=ON  VACCINES/CT
L8       185519 SEA FILE=CAPLUS ABB=ON  DNA+OLD/CT
L9       472503 SEA FILE=CAPLUS ABB=ON  GENE#/CW
L10       87418 SEA FILE=CAPLUS ABB=ON  DRUG DELIVERY SYSTEMS+OLD/CT
L12       17238 SEA FILE=CAPLUS ABB=ON  KILOBASE#
L15       98392 SEA FILE=CAPLUS ABB=ON  CARRIER#/OBI
L16      135221 SEA FILE=CAPLUS ABB=ON  GENOM?
L26        1551 SEA FILE=CAPLUS ABB=ON  (L8 OR L9)(L)(L12 OR L16) AND (L4 OR
                L5)
L29           4 SEA FILE=CAPLUS ABB=ON  L26 AND (L10 OR L15) AND L7


L6        54778 SEA FILE=CAPLUS ABB=ON  PLASMID#/OBI
L7        25954 SEA FILE=CAPLUS ABB=ON  VACCINES/CT
L11      309698 SEA FILE=CAPLUS ABB=ON  METALS/CW
L13           1 SEA FILE=REGISTRY ABB=ON  GOLD/CN
L14      165627 SEA FILE=CAPLUS ABB=ON  L13 OR GOLD
L15       98392 SEA FILE=CAPLUS ABB=ON  CARRIER#/OBI
L21        1100 SEA FILE=CAPLUS ABB=ON  (L14 OR L11)(L)L15
L30           4 SEA FILE=CAPLUS ABB=ON  L6 AND L7 AND L21


L124         11 L20 OR L22 OR L27 OR L29 OR L30

=> fil wpids; d que l46; d que l49; d que l61; s l46 or l49 or l61; fil biotechno; d que
182
FILE 'WPIDS' ENTERED AT 11:48:38 ON 26 FEB 2002
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FILE LAST UPDATED: 21 FEB 2002              <20020221/UP>
MOST RECENT DERWENT UPDATE            200212   <200212/DW>
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

>>> SDI'S MAY BE RUN ON EVERY UPDATE OR MONTHLY AS OF JUNE 2001.
    (EVERY UPDATE IS THE DEFAULT). FOR PRICING INFORMATION
    SEE HELP COST <<<

>>> FOR UP-TO-DATE INFORMATION ABOUT THE DERWENT CHEMISTRY
    RESOURCE, PLEASE VISIT
         http://www.derwent.com/chemistryresource/index.html <<<

>>> FOR DETAILS OF THE PATENTS COVERED IN CURRENT UPDATES,
    SEE http://www.derwent.com/dwpi/updates/dwpicov/index.html <<<


L32       14290 SEA FILE=WPIDS ABB=ON  VACCINE# OR VACCINAT?
L33      285309 SEA FILE=WPIDS ABB=ON  CARRIER#
```

```
L34       38537 SEA FILE=WPIDS ABB=ON  DNA OR DEOXYRIBONUCLEIC OR (DEOXY RIBO
                OR DEOXYRIBO)(W)NUCLEIC
L35     1091202 SEA FILE=WPIDS ABB=ON  METAL?
L36       25816 SEA FILE=WPIDS ABB=ON  GOLD
L39        8470 SEA FILE=WPIDS ABB=ON  GENOM?
L40         186 SEA FILE=WPIDS ABB=ON  KILOBASE# OR KILO BASE#
L41        3599 SEA FILE=WPIDS ABB=ON  L34(10A)(L39 OR L40)
L44        5744 SEA FILE=WPIDS ABB=ON  IMMUNE RESPONSE#
L46           1 SEA FILE=WPIDS ABB=ON  (L32 OR L44) AND L33 AND (L35 OR L36)
                AND L41

L31       10134 SEA FILE=WPIDS ABB=ON  PLASMID#
L32       14290 SEA FILE=WPIDS ABB=ON  VACCINE# OR VACCINAT?
L33      285309 SEA FILE=WPIDS ABB=ON  CARRIER#
L35     1091202 SEA FILE=WPIDS ABB=ON  METAL?
L36       25816 SEA FILE=WPIDS ABB=ON  GOLD
L37       30758 SEA FILE=WPIDS ABB=ON  VIRUS? OR HERPES?
L44        5744 SEA FILE=WPIDS ABB=ON  IMMUNE RESPONSE#
L49          12 SEA FILE=WPIDS ABB=ON  (L32 OR L44) AND L33(8A)(L35 OR L36)
                AND (L31 OR L37)

L31       10134 SEA FILE=WPIDS ABB=ON  PLASMID#
L32       14290 SEA FILE=WPIDS ABB=ON  VACCINE# OR VACCINAT?
L33      285309 SEA FILE=WPIDS ABB=ON  CARRIER#
L34       38537 SEA FILE=WPIDS ABB=ON  DNA OR DEOXYRIBONUCLEIC OR (DEOXY RIBO
                OR DEOXYRIBO)(W)NUCLEIC
L35     1091202 SEA FILE=WPIDS ABB=ON  METAL?
L36       25816 SEA FILE=WPIDS ABB=ON  GOLD
L37       30758 SEA FILE=WPIDS ABB=ON  VIRUS? OR HERPES?
L56      574174 SEA FILE=WPIDS ABB=ON  COAT?
L57      112770 SEA FILE=WPIDS ABB=ON  (L35 OR L36)(15A)(L56 OR L33)
L60          61 SEA FILE=WPIDS ABB=ON  L57(S)L34
L61          11 SEA FILE=WPIDS ABB=ON  L32 AND (L31 OR L37) AND L60

L125         17 L46 OR L49 OR L61

FILE 'BIOTECHNO' ENTERED AT 11:48:40 ON 26 FEB 2002
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FILE LAST UPDATED: 21 FEB 2002      <20020221/UP>
FILE COVERS 1980 TO DATE.

>>>  SIMULTANEOUS LEFT AND RIGHT TRUNCATION AVAILABLE IN
     /CT AND BASIC INDEX  <<<


L63       12026 SEA FILE=BIOTECHNO ABB=ON  VACCINATION/CT OR VACCINE/CT OR
                VACCINE PRODUCTION/CT
L64        6758 SEA FILE=BIOTECHNO ABB=ON  VIRUS/CT OR VIRUS ANTIGEN/CT
L65        1024 SEA FILE=BIOTECHNO ABB=ON  HERPES/CT OR HERPES SIMPLEX/CT
L66        4747 SEA FILE=BIOTECHNO ABB=ON  HERPES SIMPLEX VIRUS/CT OR HERPES
                SIMPLEX VIRUS 2/CT
L67         155 SEA FILE=BIOTECHNO ABB=ON  HERPES VACCINE/CT
L68        1542 SEA FILE=BIOTECHNO ABB=ON  HERPES VIRUS/CT
L69       37628 SEA FILE=BIOTECHNO ABB=ON  DNA/CT
L70       25727 SEA FILE=BIOTECHNO ABB=ON  PLASMID/CT OR PLASMID DNA/CT
```

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L71        24089 SEA FILE=BIOTECHNO ABB=ON  CARRIER#
L74        22559 SEA FILE=BIOTECHNO ABB=ON  GOLD OR METAL# OR METALLIC
L79        17804 SEA FILE=BIOTECHNO ABB=ON  COAT?
L80          526 SEA FILE=BIOTECHNO ABB=ON  L74(15A)(L71 OR L79)
L82            3 SEA FILE=BIOTECHNO ABB=ON  ((L64 OR L65 OR L66 OR L67 OR L68
                 OR L69 OR L70)) AND L63 AND L80
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=> fil drugu; d que l94; fil medl; d que l107;d que l111; s l107 or l111; fil embase; d
que l118; d que l123; s l118 or l123
FILE 'DRUGU' ENTERED AT 11:49:14 ON 26 FEB 2002
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FILE LAST UPDATED: 25 FEB 2002      <20020225/UP>
>>>  DERWENT DRUG FILE (SUBSCRIBER)  <<<

>>>  SDI'S MAY BE RUN WEEKLY OR MONTHLY AS OF JUNE 2001.  <<<
>>>  (WEEKLY IS THE DEFAULT). FOR PRICING INFORMATION     <<<
>>>  SEE HELP COST                                        <<<

>>>  FILE COVERS 1983 TO DATE  <<<
>>>  THESAURUS AVAILABLE IN /CT  <<<
```

```
L88        13872 SEA FILE=DRUGU ABB=ON  VACCINE# OR VACCINAT?
L89          100 SEA FILE=DRUGU ABB=ON  (METAL OR METALLIC OR GOLD)(15A)(CARRIER
                 # OR COAT?)
L91         3527 SEA FILE=DRUGU ABB=ON  PLASMID#
L92        37986 SEA FILE=DRUGU ABB=ON  DNA OR DEOXYRIBONUCLEIC OR (DEOXYRIBO
                 OR DEOXY RIBO)(W)NUCLEIC
L93        18621 SEA FILE=DRUGU ABB=ON  GENE# OR GENOM?
L94            8 SEA FILE=DRUGU ABB=ON  L88 AND L89 AND (L91 OR L92 OR L93)
```

```
FILE 'MEDLINE' ENTERED AT 11:49:15 ON 26 FEB 2002

  FILE LAST UPDATED: 23 FEB 2002 (20020223/UP).  FILE COVERS 1958 TO DATE.

  On April 22, 2001, MEDLINE was reloaded.  See HELP RLOAD for details.

  MEDLINE now contains IN-PROCESS records.  See HELP CONTENT for details.

  MEDLINE is now updated 4 times per week.  A new current-awareness alert
  frequency (EVERYUPDATE) is available.  See HELP UPDATE for more information.

  MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the
  MeSH 2001 vocabulary.  Enter HELP THESAURUS for details.

  The OLDMEDLINE file segment now contains data from 1958 through 1965.
  Enter HELP CONTENT for details.

  Left, right, and simultaneous left and right truncation are available in the
  Basic Index.  See HELP SFIELDS for details.

  THIS FILE CONTAINS CAS REGISTRY NUMBERS FOR EASY AND ACCURATE
  SUBSTANCE IDENTIFICATION.
```

```
L98        80941 SEA FILE=MEDLINE ABB=ON  VACCINES+NT/CT
L100       83441 SEA FILE=MEDLINE ABB=ON  PLASMIDS+NT/CT
L101       50978 SEA FILE=MEDLINE ABB=ON  DNA, VIRAL/CT
```

```
L102      167583 SEA FILE=MEDLINE ABB=ON  DNA/CT
L106        6313 SEA FILE=MEDLINE ABB=ON  GOLD/CT
L107           4 SEA FILE=MEDLINE ABB=ON  L98 AND (L100 OR L101 OR L102) AND
                 L106


L98        80941 SEA FILE=MEDLINE ABB=ON  VACCINES+NT/CT
L99       512919 SEA FILE=MEDLINE ABB=ON  METALS+NT/CT
L100       83441 SEA FILE=MEDLINE ABB=ON  PLASMIDS+NT/CT
L101       50978 SEA FILE=MEDLINE ABB=ON  DNA, VIRAL/CT
L102      167583 SEA FILE=MEDLINE ABB=ON  DNA/CT
L110       10791 SEA FILE=MEDLINE ABB=ON  PARTICLE SIZE/CT
L111           2 SEA FILE=MEDLINE ABB=ON  L98 AND L99 AND (L100 OR L101 OR
                 L102) AND L110


L126           4 L107 OR L111

FILE 'EMBASE' ENTERED AT 11:49:16 ON 26 FEB 2002
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 FILE COVERS 1974 TO 21 Feb 2002 (20020221/ED)

 EMBASE has been reloaded. Enter HELP RLOAD for details.

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.


L112       68307 SEA FILE=EMBASE ABB=ON  VACCINE+NT/CT
L114      194230 SEA FILE=EMBASE ABB=ON  DNA+NT/CT
L115       29285 SEA FILE=EMBASE ABB=ON  PLASMID+NT/CT
L117        6057 SEA FILE=EMBASE ABB=ON  GOLD/CT
L118           8 SEA FILE=EMBASE ABB=ON  L112 AND L117 AND (L114 OR L115)


L112       68307 SEA FILE=EMBASE ABB=ON  VACCINE+NT/CT
L113      314740 SEA FILE=EMBASE ABB=ON  METAL+NT/CT
L114      194230 SEA FILE=EMBASE ABB=ON  DNA+NT/CT
L115       29285 SEA FILE=EMBASE ABB=ON  PLASMID+NT/CT
L121       17458 SEA FILE=EMBASE ABB=ON  DRUG DELIVERY SYSTEM/CT
L122       14132 SEA FILE=EMBASE ABB=ON  PARTICLE SIZE/CT
L123           3 SEA FILE=EMBASE ABB=ON  L112 AND L113 AND (L114 OR L115) AND
                 (L121 OR L122)


L127           9 L118 OR L123

=> dup rem l126,l94,l124,l82,l127,l125
FILE 'MEDLINE' ENTERED AT 11:50:21 ON 26 FEB 2002

FILE 'DRUGU' ENTERED AT 11:50:21 ON 26 FEB 2002
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USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
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FILE 'BIOTECHNO' ENTERED AT 11:50:21 ON 26 FEB 2002

FILE 'EMBASE' ENTERED AT 11:50:21 ON 26 FEB 2002

FILE 'WPIDS' ENTERED AT 11:50:21 ON 26 FEB 2002

PROCESSING COMPLETED FOR L126
PROCESSING COMPLETED FOR L94
PROCESSING COMPLETED FOR L124
PROCESSING COMPLETED FOR L82
PROCESSING COMPLETED FOR L127
PROCESSING COMPLETED FOR L125
L128 48 DUP REM L126 L94 L124 L82 L127 L125 (4 DUPLICATES REMOVED)
ANSWERS '1-4' FROM FILE MEDLINE
ANSWERS '5-12' FROM FILE DRUGU
ANSWERS '13-23' FROM FILE CAPLUS
ANSWERS '24-26' FROM FILE BIOTECHNO
ANSWERS '27-34' FROM FILE EMBASE
ANSWERS '35-48' FROM FILE WPIDS

=> d ibib ab hitrn 1-48 fil hom

L128 ANSWER 1 OF 48 MEDLINE DUPLICATE 4
ACCESSION NUMBER: 97018138 MEDLINE
DOCUMENT NUMBER: 97018138 PubMed ID: 8864754
TITLE: Particle-mediated gene transfer of granulocyte-macrophage colony-stimulating factor cDNA to tumor cells: implications for a clinically relevant tumor vaccine.
AUTHOR: Mahvi D M; Burkholder J K; Turner J; Culp J; Malter J S; Sondel P M; Yang N S
CORPORATE SOURCE: Department of Surgery, University of Wisconsin, Madison 53792, USA.
SOURCE: HUMAN GENE THERAPY, (1996 Aug 20) 7 (13) 1535-43.
Journal code: A12; 9008950. ISSN: 1043-0342.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199701
ENTRY DATE: Entered STN: 19970128
Last Updated on STN: 20000407
Entered Medline: 19970102

AB The necessity for prolonged tissue culture manipulations limits the clinical application of many form of gene therapy in patients with malignancies. We hypothesized that granulocyte-macrophage colony-stimulating factor (GM-CSF) cDNA in a plasmid expression vector could be effectively introduced into resting tumor cells, without the need for tissue culture propagation prior to or following transfection, and that efficient expression of transgenic GM-CSF by the transfected tumor cells would confer an effective immune response against tumors. GM-CSF cDNA in expression vectors was coated onto gold particles and accelerated with a gene gun device into mouse and human tumor cells. Human tumor tissue transfected within 4 hr of surgery produced significant levels of transgenic human GM-CSF protein in vitro. Human GM-CSF was readily detectable in serum and at the injection site following subcutaneous implantation of these transfected tumor cells into nude mice. Transfected and irradiated murine B16 melanoma cells produced > or = 100 ng/ml murine GM-CSF/10(6) cells per 24 hr in vitro for at least 10 days. The antitumor efficacy of this nonviral approach was tested using irradiated B16 tumor cells that were transfected with mGM-CSF cDNA and injected into mice as

tumor "vaccine". Subsequent challenge of these mice with nonirradiated, nontransfected B16 tumor cells showed that 58% of the animals wer protected from the tumor by the prior vaccine treatment. In contrast, only 2% of control animals were protected by prior treatment with irradiated B16 cells transfected with the vector containing the luciferase gene. These results suggest that particle-mediated transfection of fresh tumor explants with cytokine cDNA is an effective and clinically attractive approach for cancer therapy.

L128 ANSWER 2 OF 48 MEDLINE
ACCESSION NUMBER: 2001112984 MEDLINE
DOCUMENT NUMBER: 20567972 PubMed ID: 11115698
TITLE: Induction of antigen-specific CD8+ T cells, T helper cells, and protective levels of antibody in humans by particle-mediated administration of a hepatitis B virus DNA vaccine.
AUTHOR: Roy M J; Wu M S; Barr L J; Fuller J T; Tussey L G; Speller S; Culp J; Burkholder J K; Swain W F; Dixon R M; Widera G; Vessey R; King A; Ogg G; Gallimore A; Haynes J R; Heydenburg Fuller D
CORPORATE SOURCE: PowderJect Vaccines Inc., 585 Science Drive, Madison, WI 53711, USA.
SOURCE: VACCINE, (2000 Nov 22) 19 (7-8) 764-78.
Journal code: X6O. ISSN: 0264-410X.
PUB. COUNTRY: ENGLAND: United Kingdom
(CLINICAL TRIAL)
(CLINICAL TRIAL, PHASE I)
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200102
ENTRY DATE: Entered STN: 20010322
Last Updated on STN: 20010322
Entered Medline: 20010208

AB A DNA vaccine against the hepatitis B virus (HBV) was evaluated for safety and induction of immune responses in 12 healthy, hepatitis-naive human volunteers using the needle-free PowderJect system to deliver gold particles coated with DNA directly into cells of the skin. Three groups of four volunteers received three administrations of DNA encoding the surface antigen of HBV at one of the three dose levels (1, 2, or 4 microg). The vaccine was safe and well tolerated, causing only transient and mild to moderate responses at the site of administration. HBV-specific antibody and both CD4+ and CD8+ T cell responses were measured before and after each immunization. All the volunteers developed protective antibody responses of at least 10 mIU/ml. In volunteers who were positive for the HLA class I A2 allele, the vaccine also induced antigen-specific CD8+ T cells that bound HLA-A2/HBsAg(335-343) tetramers, secreted IFN-gamma, and lysed target cells presenting a hepatitis B surface antigen (HBsAg) CTL epitope. Enumeration of HBsAg-specific T cells producing cytokine indicated preferential induction of a Type 1 T helper cell response. These results provide the first demonstration of a DNA vaccine inducing protective antibody titers and both humoral and cell-mediated immune responses in humans.

L128 ANSWER 3 OF 48 MEDLINE
ACCESSION NUMBER: 2000016508 MEDLINE
DOCUMENT NUMBER: 20016508 PubMed ID: 10547416
TITLE: Gene gun mediated vaccination is superior to manual delivery for immunisation with DNA vaccines expressing protective antigens from Yersinia pestis or Venezuelan Equine Encephalitis virus.
AUTHOR: Bennett A M; Phillpotts R J; Perkins S D; Jacobs S C; Williamson E D

CORPORATE SOURCE: Defence Evaluation and Research Agency, CBD Porton Down, Salisbury, UK.
SOURCE: VACCINE, (1999 Nov 12) 18 (7-8) 588-96.
Journal code: X60; 8406899. ISSN: 0264-410X.
PUB. COUNTRY: ENGLAND: United Kingdom
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200001
ENTRY DATE: Entered STN: 20000209
Last Updated on STN: 20000209
Entered Medline: 20000128

AB Plasmids expressing the V antigen of Yersinia pestis or the E2 glycoprotein of Venezuelan Equine Encephalitis (VEE) virus were used to vaccinate mice by intra-dermal or intra-muscular injection, or by particle-mediated bombardment using the Helios gene gun. After two immunizations, groups of mice which had received 4 microg doses of plasmid DNA using the gene gun had IgG levels which were higher than in other groups manually immunised with 12-fold more plasmid DNA. The immunoglobulin isotype profile was predominantly IgG1 following inoculation with either plasmid. Our results indicate that gene gun mediated vaccination can be used to increase the magnitude of the immune response to both bacterial and viral antigens expressed by plasmid DNA.

L128 ANSWER 4 OF 48 MEDLINE
ACCESSION NUMBER: 94030614 MEDLINE
DOCUMENT NUMBER: 94030614 PubMed ID: 8216850
TITLE: Examination of parameters affecting the elicitation of humoral immune responses by particle bombardment-mediated genetic immunization.
AUTHOR: Eisenbraun M D; Fuller D H; Haynes J R
CORPORATE SOURCE: Agracetus, Inc., Middleton, WI 53562.
SOURCE: DNA AND CELL BIOLOGY, (1993 Nov) 12 (9) 791-7.
Journal code: AF9; 9004522. ISSN: 1044-5498.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199312
ENTRY DATE: Entered STN: 19940117
Last Updated on STN: 19970203
Entered Medline: 19931222

AB A human growth hormone expression construct was delivered intracellularly into the abdominal skin of mice by particle bombardment-mediated gene transfer. Using this technology, the in vivo delivery of antigen-encoding expression vectors affixed to gold microprojectiles results in de novo antigen production in target skin and development of specific antibody responses. In this study, we examined the contribution of various delivery parameters to the resultant protein expression and related antibody responses. The highest levels of both protein expression and antibody production were correlated with particle delivery to the epidermis while deliveries extending into the dermis resulted in decreased protein and antibody production. Optimal immune responses were also shown to be dependent upon the delivery of a sufficient number of DNA-coated gold particles, indicating that a dose-response relationship exists between the number of particles delivered and the resultant protein expression and antibody production. Further, maximal protein expression and associated antibody titers were elicited with surprisingly small amounts of DNA. The practicality of targeting skin and the use of three to four orders of magnitude less DNA than is typically required in direct DNA inoculation studies demonstrates the potential utility of this emerging technology for the rapid production of antibodies in laboratory animals, and in the development of a new class of human clinical vaccines based upon direct,

intracellular DNA delivery.

L128 ANSWER 5 OF 48 DRUGU COPYRIGHT 2002 DERWENT INFORMATION LTD
ACCESSION NUMBER: 2001-29992 DRUGU M
TITLE: Protection against anthrax lethal toxin challenge by genetic immunization with a **plasmid** encoding the lethal factor protein.
AUTHOR: Price B M; Liner A L; Park S; Leppla S H; Mateczun A; Galloway D R
CORPORATE SOURCE: Univ.Ohio-State; Nat.Inst.Health-Bethesda
LOCATION: Columbus, Ohio; Bethesda; Silver Spring, Md., USA
SOURCE: Infect.Immun. (69, No. 7, 4509-15, 2001) 4 Fig. 2 Tab. 35 Ref.
CODEN: INFIBR ISSN: 0019-9567
AVAIL. OF DOC.: Department of Microbiolgoy, The Ohio State University, Columbus, OH 43017-1292, U.S.A. (D.R.G.). (e-mail: galloway.3@osu.edu).
LANGUAGE: English
DOCUMENT TYPE: Journal
FIELD AVAIL.: AB; LA; CT
FILE SEGMENT: Literature
AB **DNA**-based immunization with a **plasmid** containing the N-terminal region of Bacillus anthracis lethal factor (LF) cloned into the pCI expression vector (pCLF4) or a **plasmid** containing a biologically active B. anthracis protective antigen (PA) cloned into the pCI expression vector (pCPA), provided protection against the anthrax lethal toxin (Letx) challenge in mice. **DNA** immunization against the LF antigen alone provided complete protection against the cytotoxic effects of Letx in mice. Coimmunization with the pCPA and pCLF4 **plasmids** resulted in a greater overall Ab response to either PA or LF compared to Ab responses after immunizations with either **gene** alone. Results suggest that it is feasible to use a **DNA**-based immunization strategy against anthrax.

L128 ANSWER 6 OF 48 DRUGU COPYRIGHT 2002 DERWENT INFORMATION LTD
ACCESSION NUMBER: 2001-35542 DRUGU P
TITLE: Protective CTL response is induced in the absence of CD4+ T cells and the IFN-gamma by **gene** gun **DNA vaccination** with a minigene encoding a CTL epitope of Listeria monocytogenes.
AUTHOR: Yoshida A; Nagata T; Uchijima M; Koide Y
CORPORATE SOURCE: Univ.Hamamatsu
LOCATION: Hamamatsu, Jap.
SOURCE: Vaccine (19, No. 30, 4297-306, 2001) 6 Fig. 64 Ref.
CODEN: VACCDE ISSN: 0264-410X
AVAIL. OF DOC.: Department of Microbiology and Immunology, Hamamatsu University School of Medicine, Hamamatsu 431-3192, Japan. (Y.K.; e-mail: koidelb@hama-med.ac.jp).
LANGUAGE: English
DOCUMENT TYPE: Journal
FIELD AVAIL.: AB; LA; CT
FILE SEGMENT: Literature
AB I.m. **gene** gun **DNA vaccination** with a minigene encoding a cytotoxic T lymphocyte (CTL) epitope of Listeria monocytogenes, LLO 91-99, was capable of inducing protective CTL producing interferon-gamma (IFN-gamma) in mice. The generation of CTL was independent of CD4+ T cells, IFN-gamma, and prominent adjuvant activity of **plasmid DNA**. **Vaccination** with p91m encoding an H-2Kd-restricted T cell epitope of listeriolysin O induced antigen-specific CD8+ CTL that produced IFN-gamma. **Vaccination** with p91m was capable of confering partial protection against listerial challenge. Data show that the IFN-gamma produced by the CTL is not required for the antilisterial resistance. It would seem prudent to

employ this **gene** gun system to design CTL-inducing **vaccine** formulations in CD4+ T cell immunodeficiencies, such as AIDS.

L128 ANSWER 7 OF 48 DRUGU COPYRIGHT 2002 DERWENT INFORMATION LTD
ACCESSION NUMBER: 2001-20874 DRUGU M
TITLE: Effective particle-mediated **vaccination** against mouse melanoma by coadministration of **plasmid DNA** encoding gp100 and granulocyte-macrophage colony-stimulating factor.
AUTHOR: Rakhmilevich A L; Imboden M; Hao Z; Macklin M D; Roberts T; Wright K M; Albertini M R; Yang N S; Sondel P M
CORPORATE SOURCE: Univ.Wisconsin-Madison; PowerJect-Vaccines
LOCATION: Madison, Wis., USA
SOURCE: Clin.Cancer Res. (7, No. 4, 952-61, 2001) 8 Fig. 41 Ref.
CODEN: CCREF ISSN: 1078-0432
AVAIL. OF DOC.: University of Wisconsin Comprehensive Cancer Center and Department of Human Oncology, University of Wisconsin Medical School, CSC K4/413, 600 Highland Avenue, Madison, WI 53792, U.S.A.
LANGUAGE: English
DOCUMENT TYPE: Journal
FIELD AVAIL.: AB; LA; CT
FILE SEGMENT: Literature
AB The efficacy of particle-mediated **vaccination** by coadministration of intradermal **plasmid DNA** encoding glycoprotein 100 (gp100) and mouse granulocyte-macrophage colony-stimulating factor (GM-CSF) against mouse melanoma cells (B16) was determined in vitro and in vivo. Gp100 **plasmid vaccination** resulted in substantial protection against B16-gp100 tumors, but not against wild-type B16 tumors or B16 tumor cells transfected with empty vector. Coadministration of GM-CSF **DNA** with gp100 **DNA** enhanced antitumor efficacy compared with gp100 **DNA** alone. Tumor protection induced by gp100 + GM-CSF was T-cell mediated. Gp100 + GM-CSF **DNA** was also effective in mice bearing established tumors. Results suggest that inclusion of GM-CSF **DNA** augments the efficacy of particle-mediated **vaccination** with gp100 **DNA**.

L128 ANSWER 8 OF 48 DRUGU COPYRIGHT 2002 DERWENT INFORMATION LTD
ACCESSION NUMBER: 2002-03346 DRUGU M
TITLE: A combination **vaccine** confers full protection against co-infections with influenza, herpes simplex and respiratory syncytial viruses.
AUTHOR: Talaat A M; Lyons R; Johnston S A
CORPORATE SOURCE: Univ.Texas-Syst.; Univ.New-Mexico
LOCATION: Dallas, Tex.; Albuquerque, N.Mex., USA
SOURCE: Vaccine (20, No. 3-4, 538-44, 2001) 3 Fig. 28 Ref.
CODEN: VACCDE ISSN: 0264-410X
AVAIL. OF DOC.: Dept. of Internal Med., Ctr. for Biomed. Inventions, Univ. Texas Southwestern Med. Ctr., 5323 Harry Hines Blvd., Dallas, TX 75390-8573, U.S.A. (S.A.J.). (e-mail: stephen.johnston@utsouthwestern.edu).
LANGUAGE: English
DOCUMENT TYPE: Journal
FIELD AVAIL.: AB; LA; CT
FILE SEGMENT: Literature
AB An i.m. injection as well as **gene** inoculation of **plasmid-coated gold** beads of **DNA** encoding the influenza A virus (INF-A) hemagglutinin (HA), and INF-A nucleoprotein (NP) antigens, the HSV-1 glycoprotein D (gD) protein, and the respiratory syncytial virus (RSV) glycoprotein F antigen conferred protection against each of INF-A, HSV-1, and RSV in a mouse-based

challenge. This protection was indistinguishable from the protection conferred by administering each **plasmid** separately.This protection was also robust enough to even protect against a challenge by all 3 viral pathogens at once. A protective response was also generated even when Mycoplasma pulmonis was included in the multiple challenges. If findings are extendable to other combinations of **vaccines** in other hosts, they would support the development of **gene vaccines** as multi-component, combination **vaccines**.

L128 ANSWER 9 OF 48 DRUGU COPYRIGHT 2002 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1999-30779 DRUGU P B M
TITLE: **Genes** that induce immunity - **DNA vaccines**.
AUTHOR: Sasaki S; Inamura K; Okuda K
CORPORATE SOURCE: Univ.Yokohama-City
LOCATION: Yokohama, Jap.
SOURCE: Microbiol.Immunol. (43, No. 3, 191-200, 1999) 4 Fig. 1 Tab. 85 Ref.
CODEN: MIIMDV ISSN: 0385-5600
AVAIL. OF DOC.: Department of Bacteriology, Yokohama City University School of Medicine, 3-9 Fukuura, Yokohama, Kanagawa 236-0004, Japan. (K.O.). (e-mail: kokuda@med.yokohama-cu.ac.jp).
LANGUAGE: English
DOCUMENT TYPE: Journal
FIELD AVAIL.: AB; LA; CT
FILE SEGMENT: Literature
AB The current status of **DNA vaccines** is reviewed with references to the advantages of **DNA vaccines**, the induction of immune response by **DNA vaccines**, the mode of **DNA** delivery and types of immune response, immunostimulatory **DNA** sequences and optimization of **DNA** -derived immunity. **DNA vaccines** have several advantageous features over traditional live-attenuated, whole-killer or protein **vaccines**, and their study throws important light on control strategies against infectious diseases. Recently, several studies of **DNA vaccines** against HIV-1 have been reported. Since **DNA vaccines** have potential advantages over traditional **vaccines**, HIV-1 specific **DNA vaccines** are expected to provide a new way to control the pandemic of AIDS.

L128 ANSWER 10 OF 48 DRUGU COPYRIGHT 2002 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1998-12067 DRUGU P
TITLE: Measles virus **DNA vaccination**: Antibody isotype is determined by the method of immunization and by the nature of both the antigen and the coimmunized antigen.
AUTHOR: Cardoso A I; Sixt N; Vallier A; Fayolle J; Buckland R; Wild T F
CORPORATE SOURCE: INSERM
LOCATION: Lyon, Fr.
SOURCE: J.Virol. (72, No. 3, 2516-18, 1998) 4 Fig. 23 Ref.
CODEN: JOVIAM ISSN: 0022-538X
AVAIL. OF DOC.: INSERM Unit 404 "Immunity and Vaccination", Institut Pasteur de Lyon, Ave. Tony Garnier, 69365 Lyon Cedex 07, France. (T.F.W.). (e-mail: wild@lyon151.inserm.fr).
LANGUAGE: English
DOCUMENT TYPE: Journal
FIELD AVAIL.: AB; LA; CT
FILE SEGMENT: Literature
AB I.m. immunization of mice with **plasmids** encoding the measles virus hemagglutinin (HA) protein or nucleoprotein (NP) induced mainly an IgG2a Ab response for both antigens. When the antigens were delivered by epidermal **gene** gun, the major Ab response was still IgG2a for

NP, but it was IgG1 for HA. When the antigens were delivered by **gene** gun in combination, the Ab response was IgG1 for both antigens. **Gene** gun immunization produced a good cytotoxic T-lymphocyte (CTL) response for both antigens. **DNA** encoding the antigens was **coated** onto **gold** beads mixed with spermidine for **gene** gun delivery.

L128 ANSWER 11 OF 48 DRUGU COPYRIGHT 2002 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1997-31970 DRUGU M P
TITLE: Early studies on **DNA**-based immunizations for measles virus.
AUTHOR: Yang K; Mustafa F; Valsamakis A; Santoro J C; Griffin D E; Robinson H L
CORPORATE SOURCE: Univ.Massachusetts; Univ.Johns-Hopkins
LOCATION: Baltimore, Md.; Worcerster, Mass. , USA
SOURCE: Vaccine (15, No. 8, 888-91, 1997) 2 Fig. 1 Tab. 11 Ref.
CODEN: VACCDE ISSN: 0264-410X
AVAIL. OF DOC.: Department of Pathology, Univerisity of Massachusetts Medical School, Worcester, MA 01655-0125, U.S.A.
LANGUAGE: English
DOCUMENT TYPE: Journal
FIELD AVAIL.: AB; LA; CT
FILE SEGMENT: Literature
AB **DNA**-mediated immunizations have been used to raise neutralizing antibodies for measles virus. Single inoculations of **plasmids** expressing measles hemagglutinin or fusion glycoproteins raised neutralizing antibody in BALB/c mice. **Plasmids** expressing the hemagglutinin glycoprotein (both normal and secreted) raised neutralizing responses that persisted for 1 yr. For both forms of hemagglutinin, the effectiveness of the raised antibody (ration of neutralizing activity to ELISA activity) was similar. High titers of neutralizing antibody were also raised by inoculation of rabbits with the hemagglutinin and fusion glycoprotein-expressing **plasmids**. Challenges for the future are to evaluate the potential of the H and F-expressing **plasmids** to raise protection in nonhuman primates and to evaluate whether the use of **DNA** will support immunization in the presence of maternal antibodies.

L128 ANSWER 12 OF 48 DRUGU COPYRIGHT 2002 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1995-03998 DRUGU M G
TITLE: Protection of ferrets against influenza challenge with a **DNA vaccine** to the haemagglutinin.
AUTHOR: Webster R G; Fynan E F; Santoro J C; Robinson H
CORPORATE SOURCE: Univ.Tennessee; Univ.Massachusetts
LOCATION: Memphis, Tenn.; Worcester, Mass., USA
SOURCE: Vaccine (12, No. 16, 1495-98, 1994) 3 Tab. 11 Ref.
CODEN: VACCDE ISSN: 0264-410X
AVAIL. OF DOC.: Department of Pathology, University of Massachusetts Medical School, 55 Lake Avenue North, Worcester, MA 01655, U.S.A. (H.R.).
LANGUAGE: English
DOCUMENT TYPE: Journal
FIELD AVAIL.: AB; LA; CT
FILE SEGMENT: Literature
AB I.m. (500 ug) or **gene**-gun (0.4 or 2 ug) immunization with a **plasmid DNA** expressing influenza virus hemagglutinin (pCMV/H1 **DNA**) afforded complete protection against intranasal challenge with the homologous A/PR/8/34 (H1N1) influenza virus at 1 wk later in female ferrets (4-6 mth). **Gene**-gun delivery of **DNA-coated gold** beads (at 0.2 ug/shot) was much more efficient than i.m. delivery of **DNA** in aqueous solution (as 2 or 3 injections). Furthermore, the serum neutralizing antibody response elicited by **gene**-gun delivery of the

DNA was more cross-reactive than that elicited by its i.m. delivery. This novel recombinant approach to **vaccination** against influenza may actually offer broader protection against antigenic drift than that given by natural infection. (No EX).

L128 ANSWER 13 OF 48 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 1
ACCESSION NUMBER: 2001:338390 CAPLUS
DOCUMENT NUMBER: 134:352268
TITLE: DNA-vaccines based on constructs derived from the genomes of human and animal pathogens
INVENTOR(S): Swain, William F.; Roberts, Lee K.; Payne, Lendon G.; Braun, Ralph P.
PATENT ASSIGNEE(S): Powderject Vaccines, Inc., USA
SOURCE: PCT Int. Appl., 62 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001032221	A1	20010510	WO 2000-US30282	20001102

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 1999-432361 A 19991103
AB Methods of eliciting an immune response in a subject by administering one or more large genomic DNA fragments are provided. Also provided are methods of identifying sequences encoding antigenic polypeptides. Also provided are vaccine compns. comprising one or more large genomic DNA fragments.
IT **7440-57-5, Gold,** biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**carrier**; DNA-vaccines based on constructs derived from the genomes of human and animal pathogens)
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L128 ANSWER 14 OF 48 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 2
ACCESSION NUMBER: 2001:338374 CAPLUS
DOCUMENT NUMBER: 134:352266
TITLE: Nucleic acid vaccine compositions having a mammalian CD80/CD86 gene promoter driving antigen expression
INVENTOR(S): Umlauf, Scott
PATENT ASSIGNEE(S): Powderject Vaccines, Inc., USA
SOURCE: PCT Int. Appl., 81 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001032204	A2	20010510	WO 2000-US30223	20001101

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP,

KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN,
MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM,
TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
PRIORITY APPLN. INFO.: US 1999-432983 A 19991103

AB Polynucleotides encoding at least one immunizing antigen whose expression is controlled by a promoter derived from a gene encoding a co-stimulatory mol. are provided. The polynucleotides may also encode adjuvants. Compns. comprising at least one immunizing agent and at least one cytokine that enhance dendritic cell stimulation and/or survival are also provided. Methods for eliciting an immune response against the immunizing agent are also provided. The method includes the steps of administering the polynucleotides and, optionally, co-administering an adjuvant.

IT **7440-57-5, Gold**, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**carriers**; nucleic acid vaccine compns. having a mammalian CD80/CD86 gene promoter driving antigen expression)

L128 ANSWER 15 OF 48 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 3
ACCESSION NUMBER: 2000:535019 CAPLUS
DOCUMENT NUMBER: 133:149126
TITLE: DNA vaccines against hantavirus infections
INVENTOR(S): Schmaljohn, Connie S.; Hooper, J. W.
PATENT ASSIGNEE(S): U.S. Medical Research Institute of Infectious Diseases, USA
SOURCE: PCT Int. Appl., 64 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000044406	A2	20000803	WO 2000-US1999	20000127
WO 2000044406	A3	20001116		

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

EP 1146900	A2	20011024	EP 2000-908388	20000127

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO

PRIORITY APPLN. INFO.: US 1999-117680 P 19990129
WO 2000-US1999 W 20000127

AB Seoul virus (SEOV) is one of four known hantaviruses causing hemorrhagic fever with renal syndrome (HFRS). Candidate naked DNA vaccines for HFRS were constructed by subcloning cDNA representing the medium (M) (encoding the G1 and G2 glycoproteins) or small (S) (encoding the nucleocapsid protein) genome segment of SEOV into the DNA expression vector pWRG7077. We vaccinated BALB/c mice with three doses of the M or S DNA vaccine at 4-wk intervals by either gene gun inoculation of the epidermis, or needle inoculation into the gastrocnemius muscle. Both routes of vaccination resulted in antibody responses as measured by ELISA; however, gene gun inoculation elicited a higher frequency of seroconversion, and higher levels of antibodies in individual mice. We vaccinated Syrian hamsters with the M or S construct using the gene gun and found hantavirus-specific

antibodies in 5/5 and 4/5 hamsters, resp. Animals vaccinated with the M construct developed a neutralizing antibody response which was greatly enhanced in the presence of guinea pig complement. Immunized hamsters were challenged with SEOV and, after 28 days, were monitored for evidence of infection. Hamsters vaccinated with M were protected from infection, but hamsters vaccinated with S were not protected.

IT **7440-57-5, Gold,** biological studies
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**carrier**; DNA vaccines against hantavirus infections)

L128 ANSWER 16 OF 48 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:676624 CAPLUS
DOCUMENT NUMBER: 135:247186
TITLE: DNA vaccines against poxviruses
INVENTOR(S): Hooper, Jay W.; Schmaljohn, Alan L.; Schmaljohn, Connie S.
PATENT ASSIGNEE(S): U.S. Army Medical Research Institute of Infectious Diseases, USA
SOURCE: PCT Int. Appl., 65 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001066138	A2	20010913	WO 2001-US7391	20010307

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2000-187608 P 20000307

AB A poxvirus naked DNA vaccine which protects animals against poxvirus challenge comprising nucleic acids encoding an intracellular mature virion (IMV) and nucleic acids encoding an extracellular enveloped virion (EEV) of poxvirus is described. Poxvirus is chosen from the group consisting of variola virus, monkeypox virus, cowpox virus, orf virus, paravaccinia virus, Tana pox virus, Yaba pox virus, and Molluscum contagiosum virus. Methods of use of the vaccine and its advantages are described. For example, in mice DNA vaccination with VACV IMV immunogens L1R or A27L elicited neutralizing antibodies while DNA vaccination with VACV EEV immunogens A33R and B5R elicited non-neutralizing antibodies. DNA vaccination with L1R+A27L+A33R+B5R completely protected mice from challenge, and the lack of wt. loss indicates low morbidity.

IT **7440-57-5, Gold,** biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(particles; DNA sequences coated onto **carrier** particles for vaccines against poxviruses)

L128 ANSWER 17 OF 48 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:416789 CAPLUS
DOCUMENT NUMBER: 135:29870
TITLE: The genome of transmissible gastroenteritis virus and related viral vectors
INVENTOR(S): Enjuanes Sanchez, Luis
PATENT ASSIGNEE(S): Consejo Superior de Investigaciones Cientificas, Spain
SOURCE: PCT Int. Appl., 80 pp.

CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001039797	A2	20010607	WO 2000-EP12063	20001130
WO 2001039797	A3	20020124		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: ES 1999-2673 A 19991203

AB The present invention relates to methods of prepg. a DNA comprising a full length copy of the genomic RNA (gRNA) or an RNA virus. The complete genome of transmissible gastroenteritis virus (TGEV) was cloned and in vivo infectivity of the TGEV cDNA was estd. on newborn pigs. DNA comprising one or several fragments of a gRNA of an RNA virus, which fragments encode for an RNA dependent RNA polymerase and at least one structural or non-structural protein, is cloned into a bacterial artificial chromosome (BAC). Addnl., DNA are provided, which comprise sequence derived from the genomic RNA (gRNA) of a coronavirus encoding an RNA dependent RNA polymerase and at least one structural or non-structural protein, wherein a fragment of said DNA is capable of being transcribed into RNA which RNA can be assembled to a virion. Further, the use of these nucleic acids for prepn. of viral RNA or virions as well as pharmaceutical prepns. comprising these DNAs, viral RNAs or virions is disclosed.

L128 ANSWER 18 OF 48 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:50787 CAPLUS
DOCUMENT NUMBER: 134:120912
TITLE: Vaccine against lentiviral infections such as feline immunodeficiency virus
INVENTOR(S): Leutenegger, Christian; Schroff, Matthias; Wittig, Burghardt; Lutz, Hans
PATENT ASSIGNEE(S): Mologen Forschungs-, Entwicklungs- und Vertriebs G.m.b.H., Germany; Universitat Zurich
SOURCE: PCT Int. Appl., 37 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001004280	A2	20010118	WO 2000-DE2262	20000708
WO 2001004280	A3	20010705		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,

DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
PRIORITY APPLN. INFO.: CH 1999-1258 A 19990708
AB The invention relates to a vaccine which is capable of inducing protection against disease as a result of a lentiviral infection, in particular, infection with the feline immune deficiency virus (FIV). The vaccination can be carried out in such a way, that inoculated animals can be differentiated from diseased or infected animals by the status of their antibodies. A vaccine of this type contains a DNA sequence which contains the envelope glycoprotein and preferably a part of the gene that codes for the transmembrane protein. The invention is also characterized in that suitable adjuvants are added to the vaccine mixt. which elicit a cytotoxic immune response, for example a cytokine of the TH1 response, cytokine-encoding DNA expression constructions, or immune-stimulatory DNA sequences.
IT **7440-57-5, Gold**, biological studies
RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(drug **carrier**; vaccine against lentiviral infections such as feline immunodeficiency virus)

L128 ANSWER 19 OF 48 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2000:814337 CAPLUS
DOCUMENT NUMBER: 133:361908
TITLE: Bacteriophage isolated from bacterial genomes and extrachromosomal elements and methods of use thereof
INVENTOR(S): Karaolis, David K. R.
PATENT ASSIGNEE(S): University of Maryland, Baltimore, USA
SOURCE: PCT Int. Appl., 59 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000067784	A1	20001116	WO 2000-US12580	20000510

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 1999-133373 P 19990510
AB The present invention relates to compns., methods, processes, etc., relating to bacteriophage which are encoded by chromosome, plasmids, or an extrachromosomal element of bacteria. The bacteriophage of the present invention are preferably encoded by pathogenicity islands in chromosomes or plasmids of pathogenic bacteria. The bacteriophage can be utilized as a pharmaceutical compn., e.g., to elicit an immune response, e.g., for the purpose of producing antibodies, as vaccines and vaccine vectors to regulate the immune system, e.g., for the prevention and treatment of allergy, disease, and other pathol. conditions. The invention finds addnl. utility in systems and methods for the detection of pathogens comprising bacteriophage and a system and method for the environmental eradication of pathogenic microorganisms.
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L128 ANSWER 20 OF 48 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2000:707011 CAPLUS
DOCUMENT NUMBER: 133:280553
TITLE: Attenuated dengue-4 virus vaccine
INVENTOR(S): Eckels, Kenneth H.; Putnak, Joseph R.; Dubois, Doria R.; Innis, Bruce L.; Hoke, Charles H.; Vaughn, David W.
PATENT ASSIGNEE(S): Walter Reed Army Institute of Research, USA
SOURCE: PCT Int. Appl., 101 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000057910	A1	20001005	WO 2000-US8277	20000324
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1165129	A1	20020102	EP 2000-919775	20000324
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				

PRIORITY APPLN. INFO.: US 1999-126318 P 19990326
US 2000-182068 P 20000211
WO 2000-US8277 W 20000324

AB The present invention provides vaccine compns. of attenuated dengue-4 virus. More specifically, the attenuated virus is produced by serial passage in PDK cells. The invention also provides methods for stimulating the immune system of an individual to induce protection against dengue-4 virus by administration of attenuated dengue-4 virus.

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L128 ANSWER 21 OF 48 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2000:573685 CAPLUS
DOCUMENT NUMBER: 133:176167
TITLE: Mycobacterium tuberculosis , immunization
INVENTOR(S): Macklin, Michael D.; Fuller, Deborah L.
PATENT ASSIGNEE(S): Powderject Vaccines, Inc., USA
SOURCE: PCT Int. Appl., 63 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000047227	A2	20000817	WO 2000-US3374	20000209
WO 2000047227	A3	20001221		
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				

RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 1999-119515 P 19990209
US 1999-161699 P 19991026

AB Recombinant nucleic acid mols. are described. The mols. have a sequence or sequences encoding at least two M. tuberculosis antigens. Vectors and compns. contg. these mols. are also described. In addn., compns. contg. a cocktail of recombinant nucleic acid mols. having a sequence or sequences encoding one or more M. tuberculosis antigens are described. Methods of eliciting an immune response using these mols. and compns. are also described.

IT **7440-57-5, Gold,** biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(particle **carrier;** polynucleotide vector encoding at least two Mycobacterium tuberculosis antigen for immunization)

L128 ANSWER 22 OF 48 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1999:673011 CAPLUS
DOCUMENT NUMBER: 131:296229
TITLE: Porcine adenovirus type 3 genome structure and construction of recombinant vectors
INVENTOR(S): Reddy, Police Seshidhar; Tikoo, Suresh Kumar; Babiuk, Lorne A.
PATENT ASSIGNEE(S): University of Saskatchewan, Can.
SOURCE: PCT Int. Appl., 87 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9953047	A2	19991021	WO 1999-US8220	19990415
WO 9953047	A3	20000113		

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

AU 9935617	A1	19991101	AU 1999-35617	19990415
EP 1071758	A1	20010131	EP 1999-917515	19990415

R: AT, BE, CH, DE, DK, FR, GB, LI, NL, IE

PRIORITY APPLN. INFO.: US 1998-81882 P 19980415
WO 1999-US8220 W 19990415

AB The complete nucleotide sequence of the genome of porcine adenovirus type 3 (PAV-3) is provided. Methods for construction of infectious PAV genomes by homologous recombination in prokaryotic cells are provided. Recombinant PAV viruses are obtained by transfection of mammalian cells with recombinant PAV genomes. The PAV-3 genome can be used as a vector for the expression of heterologous nucleotide sequences, for example, for the prepn. and administration of subunit vaccines to swine or other mammals. In addn., PAV-3 vectors can be used for gene therapy and expression of heterologous polypeptides. PAV-3 genome sequences can also be used for diagnostic purposes, to detect the presence of PAV-3 DNA in a subject or biol. sample.

L128 ANSWER 23 OF 48 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1999:728926 CAPLUS
DOCUMENT NUMBER: 132:48709
TITLE: BAC-VAC, a novel generation of (DNA) vaccines: A bacterial artificial chromosome (BAC) containing a replication-competent, packaging-defective virus genome induces protective immunity against **herpes** simplex virus 1
AUTHOR(S): Suter, Mark; Lew, Andrew M.; Grob, Philipp; Adema, Gosse J.; Ackermann, Mathias; Shortman, Ken; Fraefel, Cornel
CORPORATE SOURCE: Institute of Virology, University of Zurich, Zurich, CH-8057, Switz.
SOURCE: Proc. Natl. Acad. Sci. U. S. A. (1999), 96(22), 12697-12702
CODEN: PNASA6; ISSN: 0027-8424
PUBLISHER: National Academy of Sciences
DOCUMENT TYPE: Journal
LANGUAGE: English
AB This study aimed to exploit bacterial artificial chromosomes (BAC) as large antigen-capacity DNA vaccines (BAC-VAC) against complex pathogens, such as herpes simplex virus 1 (HSV-1). The 152-kbp HSV-1 genome recently has been cloned as an F-plasmid-based BAC in Escherichia coli (fHSV), which can efficiently produce infectious virus progeny upon transfection into mammalian cells. A safe modification of fHSV, fHSV.DELTA.pac, does not give rise to progeny virus because the signals necessary to package DNA into virions have been excluded. However, in mammalian cells fHSV.DELTA.pac DNA can still replicate, express the HSV-1 genes, cause cytotoxic effects, and produce virus-like particles. Because these functions mimic the lytic cycle of the HSV-1 infection, fHSV.DELTA.pac was expected to stimulate the immune system as efficiently as a modified live virus vaccine. To test this hypothesis, mice were immunized with fHSV.DELTA.pac DNA applied intradermally by **gold**-particle bombardment, and the immune responses were compared with those induced by infection with disabled infectious single cycle HSV-1. Immunization with either fHSV.DELTA.pac or disabled infectious single cycle HSV-1 induced the priming of HSV-1-specific cytotoxic T cells and the prodn. of virus-specific antibodies and conferred protection against intracerebral injection of wild-type HSV-1 at a dose of 200 LD50. Protection probably was cell-mediated, as transfer of serum from immunized mice did not protect naive animals. We conclude that BAC-VACs per se, or in combination with genetic elements that support replicative amplification of the DNA in the cell nucleus, represent a useful new generation of DNA-based vaccination strategies for many viral and nonviral antigens.
REFERENCE COUNT: 50 THERE ARE 50 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L128 ANSWER 24 OF 48 BIOTECHNO COPYRIGHT 2002 Elsevier Science B.V.
ACCESSION NUMBER: 2001:33063255 BIOTECHNO
TITLE: Epidermal powder immunization induces both cytotoxic T-lymphocyte and antibody responses to protein antigens of influenza and hepatitis B viruses
AUTHOR: Chen D.; Weis K.F.; Chu Q.; Erickson C.; Endres R.; Lively C.R.; Osorio J.; Payne L.G.
CORPORATE SOURCE: D. Chen, PowderJect Vaccines, Inc., 585 Science Dr., Madison, WI 53711, United States.
E-mail: dexiang_chen@powderject.com
SOURCE: Journal of Virology, (2001), 75/23 (11630-11640), 56 reference(s)
CODEN: JOVIAM ISSN: 0022-538X
DOCUMENT TYPE: Journal; Article
COUNTRY: United States
LANGUAGE: English
SUMMARY LANGUAGE: English

Searched by Barb O'Bryen STIC 308-4291

AB Cytotoxic T lymphocytes (CTL) play a vital role in host defense against viral and intracellular bacterial infections. However, nonreplicating vaccines administered by intramuscular injection using a syringe and needle elicit predominantly humoral responses and not CTL responses. Here we report that epidermal powder immunization (EPI), a technology that delivers antigens on 1.5- to 2.5-.mu.m gold particles to the epidermis using a needle-free powder delivery system, elicits CTL responses to nonreplicating antigens. Following EPI, a majority of the antigen-**coated gold** particles were found in the viable epidermis in the histological sections of the target skin. Further studies using transmission electron microscopy revealed the intracellular localization of the **gold** particles. Many Langerhans cells (LCs) at the vaccination site contained antigen-**coated** particles, as revealed by two-color immunofluorescence microscopy, and these cells were found in the draining lymph nodes 20 h later. Immune responses to several viral protein antigens after EPI were studied in mice. EPI with hepatitis B surface antigen (HBsAg) and a synthetic peptide of influenza virus nucleoprotein (NP peptide) elicited antigen-specific CTL responses as well as antibody responses. In an in vitro cell depletion experiment, we demonstrated that the CTL activity against HBsAg elicited by EPI was attributed to CD8.sup.+, not CD4.sup.+, T cells. As controls, needle injections of HBsAg or the NP peptide into deeper tissues elicited solely antibody, not CTL, responses. We further demonstrated that EPI with inactivated A/Aichi/68 (H3N2) or A/Sydney/97 (H3N2) influenza virus elicited complete protection against a mouse-adapted A/Aichi/68 virus. In summary, EPI directly delivers protein antigens to the cytosol of the LCs in the skin and elicits both cellular and antibody responses.

L128 ANSWER 25 OF 48 BIOTECHNO COPYRIGHT 2002 Elsevier Science B.V.
ACCESSION NUMBER: 1998:28354700 BIOTECHNO
TITLE: DNA immunization targeting the skin: Molecular control of adaptive immunity
AUTHOR: Tuting T.; Storkus W.J.; Falo L.D. Jr.
CORPORATE SOURCE: Dr. L.D. Falo Jr., Department of Dermatology, Univ. of Pittsburgh Sch. of Medicine, Biomedical Science Tower, 200 Lothrop Street, Pittsburgh, PA 15213, United States.
SOURCE: Journal of Investigative Dermatology, (1998), 111/2 (183-188), 72 reference(s)
CODEN: JIDEAE ISSN: 0022-202X
DOCUMENT TYPE: Journal; General Review
COUNTRY: United States
LANGUAGE: English
SUMMARY LANGUAGE: English

AB DNA-based immunization represents a novel approach for vaccine development. Recombinant DNA techniques are used to clone DNA sequences encoding antigens of choice into eukaryotic expression plasmids, which are readily and economically amplified in bacteria and recovered with a high degree of purity. For immunization, plasmid DNA is either **coated** onto microscopic **gold** particles and bombarded into skin using a gene gun or injected into skin or muscle. Expression of administered genes results in the induction of humoral and cellular immune responses against the encoded antigen. DNA immunization is capable of inducing protective immunity in a number of animal models of infectious disease and cancer. Recent studies suggest that antigenspecific cytotoxic T lymphocyte induction occurs through the presentation of appropriate peptides in the context of major histocompatibility complex molecules on bone marrow-derived professional antigen presenting cells. Following DNA inoculation into the skin, Langerhans cells and/or dermal dendritic cells are believed to acquire the newly synthesized antigen, either through direct transfection or via antigen uptake from transfected keratinocytes, and migrate to regional lymph nodes where they stimulate primary T cell responses. The nature of

the immune response depends on the route, method, and timing of DNA delivery and can also be influenced by co-delivery of plasmids encoding immunomodulating cytokines like IFN-.alpha., IL-2, or IL-12 and costimulatory molecules like B7-1. While many aspects of the biology of cutaneous DNA immunization remain unknown, the skin appears to offer unique potential as a target for DNA-based immunization.

L128 ANSWER 26 OF 48 BIOTECHNO COPYRIGHT 2002 Elsevier Science B.V.
ACCESSION NUMBER: 1998:27520986 BIOTECHNO
TITLE: Gene gun particle-mediated vaccination with plasmid DNA confers protective immunity against rabies virus infection
AUTHOR: Lodmell D.L.; Ray N.B.; Ewalt L.C.
CORPORATE SOURCE: D.L. Lodmell, Lab.of Persistent Viral Diseases, Nat. Inst. Allergy/Infectious Dis., Hamilton, MT 59840, United States.
SOURCE: Vaccine, (1998), 16/2-3 (115-118), 17 reference(s)
CODEN: VACCDE ISSN: 0264-410X
PUBLISHER ITEM IDENT.: S0264410X9700193X
DOCUMENT TYPE: Journal; Article
COUNTRY: United Kingdom
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Accell.RTM. gene gun particle-mediated immunization with DNA encoding the glycoprotein gene of the challenge virus standard strain of rabies virus was evaluated for its ability to elicit protective levels of serum anti-rabies virus neutralizing antibody. Strong primary and booster neutralizing antibody. Strong primary and booster neutralizing antibody responses were detected in mice following immunization with 2 .mu.g of DNA **coated** on 2.6-.mu.m **gold** beads. Protective levels of antibody persisted for over 300 days. Mice challenged intraplantarly 315 days post-primary immunization (225 days post-booster vaccination) survived lethal rabies virus challenge. Our data demonstrate a potentially significant role for gene gun-based delivery of DNA in the field of rabies virus vaccination.

L128 ANSWER 27 OF 48 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 2001140604 EMBASE
TITLE: Leishmaniasis: Current status of vaccine development.
AUTHOR: Handman E.
CORPORATE SOURCE: E. Handman, Infection and Immunity Division, Walter/Eliza Hall Inst. Med. Res., Royal Melbourne Hospital, Parkville 3050, Australia. handman@wehi.edu.au
SOURCE: Clinical Microbiology Reviews, (2001) 14/2 (229-243).
Refs: 157
ISSN: 0893-8512 CODEN: CMIREX
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 004 Microbiology
017 Public Health, Social Medicine and Epidemiology
026 Immunology, Serology and Transplantation
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Leishmaniae are obligatory intracellular protozoa in mononuclear phagocytes. They cause a spectrum of diseases, ranging in severity from spontaneously healing skin lesions to fatal visceral disease. Worldwide, there are 2 million new cases each year and 1/10 of the world's population is at risk of infection. To date, there are no vaccines against leishmaniasis and control measures rely on chemotherapy to alleviate disease and on vector control to reduce transmission. However, a major vaccine development program aimed initially at cutaneous leishmaniasis is under way. Studies in animal models and humans are evaluating the

potential of genetically modified live attenuated vaccines, as well as variety of recombinant antigens or the DNA encoding them. The program also focuses on new adjuvants, including cytokines, and delivery systems to target the T helper type 1 immune responses required for the elimination of this intracellular organism. The availability, in the near future, of the DNA sequences of the human and Leishmania genomes will extend the vaccine program. New vaccine candidates such as parasite virulence factors will be identified. Host susceptibility genes will be mapped to allow the vaccine to be targeted to the population most in need of protection.

L128 ANSWER 28 OF 48 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 2000390275 EMBASE
TITLE: Immunization of cats against feline immunodeficiency virus (FIV) infection by using minimalistic immunogenic defined gene expression vector vaccines expressing FIV gp140 alone or with feline interleukin-12 (IL-12), IL-16, or a CpG motif.
AUTHOR: Leutenegger C.M.; Boretti F.S.; Mislin C.N.; Flynn J.N.; Schroff M.; Habel A.; Junghans C.; Koenig-Merediz S.A.; Sigrist B.; Aubert A.; Pedersen N.C.; Wittig B.; Lutz H.
CORPORATE SOURCE: C.M. Leutenegger, Dept. of Medicine and Epidemiology, School of Veterinary Medicine, University of California, Davis, CA 95616, United States. cmleutenegger@ucdavis.edu
SOURCE: Journal of Virology, (2000) 74/22 (10447-10457).
Refs: 74
ISSN: 0022-538X CODEN: JOVIAM
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 004 Microbiology
026 Immunology, Serology and Transplantation
030 Pharmacology
037 Drug Literature Index
039 Pharmacy
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Four groups of cats, each containing four animals, were immunized at 0, 3, and 6 weeks with minimalistic immunogenic defined gene expression vector (MIDGE) vaccines containing the gene(s) for feline immunodeficiency virus (FIV) gp140, FIV gp140 and feline interleukin-12 (IL-12), FIV gp140 and feline IL-16, or FIV gp140 and a CpG motif. MIDGEs were coated onto gold beads and injected intradermally with a gene gun. A fifth group of four cats were immunized in an identical manner but with blank gold beads. All cats were challenge exposed to virulent FIV 4 weeks following the final immunization, and the course of infection was monitored. The two groups of cats immunized with the FIV gp140 gene alone or with blank gold particles became highly viremic and seroconverted as early as 4 weeks after infection. In contrast, three of four cats immunized with FIV gp140 in combination with feline IL-12 failed to become viremic or seropositive, as has been shown elsewhere (F. S. Boretti, C. M. Leutenegger, C. Mislin, et al. AIDS 14:1749-1757, 2000). Here we show the effect of IL-12 when used as an adjuvant on the viral RNA and DNA load and on the cytokine profile. In addition, the two groups of cats immunized either with gp140 and IL-16 or with gp140 and the CpG had greatly reduced viremia. Protection correlated weakly with cytotoxic T-lymphocyte activity and increased cytokine transcription of IL-12, gamma interferon, and IL-10 by peripheral blood mononuclear cells in the postchallenge period. This study extends the data on IL-12 and provides new results on CpG motifs and IL-16 used as adjuvants in the FIV cat model.

L128 ANSWER 29 OF 48 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 2001005417 EMBASE
TITLE: Respiratory syncytial virus infection of gene gun vaccinated mice induces Th2-driven pulmonary eosinophilia

even in the absence of sensitisation to the fusion (F) or attachment (G) protein.

AUTHOR: Bembridge G.P.; Rodriguez N.; Garcia-Beato R.; Nicolson C.; Melero J.A.; Taylor G.
CORPORATE SOURCE: G.P. Bembridge, Institute for Animal Health, Newbury, Berkshire RG20 7NN, United Kingdom. gary.bembridge@bbsrc.ac.uk

SOURCE: Vaccine, (8 Dec 2000) 19/9-10 (1038-1046).
Refs: 28
ISSN: 0264-410X CODEN: VACCDE
PUBLISHER IDENT.: S 0264-410X(00)00344-3
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 004 Microbiology
015 Chest Diseases, Thoracic Surgery and Tuberculosis
026 Immunology, Serology and Transplantation
030 Pharmacology
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English

AB Complete protection against respiratory syncytial virus (RSV) infection was induced in mice vaccinated on two occasions with 2.5 .mu.g of DNA, encoding the fusion (F) protein of RSV, precipitated onto gold microbeads. In contrast, immunisation with DNA encoding the attachment (G) protein of RSV resulted in a significant reduction in viral load following infection, but did not afford complete protection. Gene gun delivery of DNA-F elicited a T helper-2 (Th2) biased immune response that could not be modulated by the co-delivery of plasmids encoding IL-2, IL-12 or IFN.gamma.. Similarly gene gun delivery of DNA-G primed a Th2 response. Thus, all gene gun vaccinated mice produced a predominant Th2 biased pulmonary immune response characterised by the production of IL-4 and IL-5 with little IFN.gamma. following RSV challenge. Analysis of bronchoalveolar lavage (BAL) cells, 5 days post challenge, indicated that there was only a two-fold increase in the number of inflammatory cells in vaccinated compared with control animals. Despite the strong Th2 cytokine bias of lung lymphocytes and the predominant recruitment of CD4(+) T cells, following challenge, there was not a marked pulmonary eosinophilic response (range from 2 to 7% of BAL). In contrast, the BAL from mice vaccinated with control plasmid contained significantly more eosinophils than any other group. .COPYRGT. 2000 Elsevier Science Ltd.

L128 ANSWER 30 OF 48 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 1999076585 EMBASE
TITLE: DNA vaccines for viral diseases.
AUTHOR: Donnelly J.J.; Ulmer J.B.
CORPORATE SOURCE: J.J. Donnelly, Chiron Corporation, M/S 4.3156, 4560 Horon St., Emeryville, CA 94608, United States
SOURCE: Brazilian Journal of Medical and Biological Research, (1999) 32/2 (215-222).
Refs: 25
ISSN: 0100-879X CODEN: RBPMB2
COUNTRY: Brazil
DOCUMENT TYPE: Journal; Conference Article
FILE SEGMENT: 037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English

AB DNA plasmids encoding foreign proteins may be used as immunogens by direct intramuscular injection alone, or with various adjuvants and excipients, or by delivery of DNA-coated gold particles to the epidermis through biolistic immunization. Antibody, helper T lymphocyte, and cytotoxic T lymphocyte (CTL) responses have been induced in laboratory and domesticated animals by these methods. In a number of animal models, immune responses induced by DNA vaccination have been shown to be

protective against challenge with various infectious agents. Immunization by injection of plasmids encoding foreign proteins has been used successfully as a research tool. This review summarizes the types of DNA vaccine vectors in common use, the immune responses and protective responses that have been obtained in animal models, the safety considerations pertinent to the evaluation of DNA vaccines in humans and the very limited information that is available from early clinical studies.

L128 ANSWER 31 OF 48 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 1999038601 EMBASE
TITLE: DNA immunization by intramuscular injection or gene gun induces specific IgG antibodies against a Schistosoma japonicum 22 kDa antigen, Sj22, when fused to the murine Ig K-chain secretory leader sequence.
AUTHOR: Waine G.J.; Mazzer D.R.; McManus D.P.
SOURCE: Parasite Immunology, (1999) 21/1 (53-56).
Refs: 13
ISSN: 0141-9838 CODEN: PAIMD8
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 004 Microbiology
026 Immunology, Serology and Transplantation
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English
AB The 22 kDa tegumental surface membrane-associated antigen of Schistosoma japonica, Sj22, is of recognised interest in schistosomiasis vaccine research. However, previous attempts to induce antibody responses against Sj22 by DNA immunization have been unsuccessful. In this report we demonstrate that fusing the Sj22 cDNA to the murine immunoglobulin Ig .kappa.-chain secretory leader sequence results in the generation of antigen-specific IgG antibodies following DNA immunization. Mice were immunized into the skin with DNA-coated gold microspheres using a gene-gun, or into the quadriceps muscle by intramuscular injection. Both methods of delivery generated antigen-specific IgG antibodies against the 22 kDa schistosome antigen. The use of a secretory leader sequence, such as the murine Ig-kappa chain used in his study, may facilitate the induction of host antibody responses following DNA immunization with other parasite cDNAs.

L128 ANSWER 32 OF 48 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 2000008581 EMBASE
TITLE: Particle-mediated DNA immunization of cattle confers long-lasting immunity against bovine herpesvirus-1.
AUTHOR: Braun R.P.; Babiuk L.A.; Loehr B.I.; Van Drunen Littel-Van den Hurk S.
CORPORATE SOURCE: S. Van Drunen Littel-Van den Hurk, Veterinary Infect. Dis. Organization, University of Saskatchewan, 120 Veterinary Road, Saskatoon, Sask. S7N 5E3, Canada. vandenhurk@sask.usask.ca
SOURCE: Virology, (5 Dec 1999) 265/1 (46-56).
Refs: 31
ISSN: 0042-6822 CODEN: VIRLAX
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 004 Microbiology
026 Immunology, Serology and Transplantation
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Particle-mediated delivery was used as a method to vaccinate ruminants with a DNA vaccine. The optimal conditions for gene gun-based delivery of

gold particles into the epidermal layer of the skin were determined. After delivery of the gold particles, an inflammatory response was observed. This response occurred regardless of the presence of plasmid and therefore was a result of the physical disturbance of the skin by the gold particles. To identify transfected cells, a plasmid expressing a green fluorescent protein was delivered into the skin. Fluorescent cells were located primarily in the outermost layers of the epidermis and outside the core of gold particles deposited by the gene gun. Cattle were immunized by gene gun with a plasmid expressing a truncated, secreted form of bovine herpesvirus-1 glycoprotein D. Serum antibody responses, antigen-specific proliferation, and interferon-.gamma. secretion by peripheral blood lymphocytes were demonstrated. These immune responses were found to be of long duration and sufficient magnitude to protect cattle against challenge with bovine herpesvirus-1, which demonstrates the efficacy of gene gun-based delivery of DNA vaccines to target species.

L128 ANSWER 33 OF 48 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 1998417962 EMBASE
TITLE: Delivering the message.
AUTHOR: Horspool K.
CORPORATE SOURCE: K. Horspool, Zeneca Pharmaceuticals, Mereside, Alderley Edge SK10 4TG, United Kingdom
SOURCE: Pharmaceutical Science and Technology Today, (1998) 1/9 (364-366).
Refs: 1
ISSN: 1461-5347 CODEN: PSTTF8
PUBLISHER IDENT.: S 1461-5347(98)00103-5
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; Conference Article
FILE SEGMENT: 027 Biophysics, Bioengineering and Medical Instrumentation
037 Drug Literature Index
039 Pharmacy
LANGUAGE: English

L128 ANSWER 34 OF 48 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 94369175 EMBASE
DOCUMENT NUMBER: 1994369175
TITLE: Accell.RTM. particle-mediated DNA immunization elicits humoral, cytotoxic, and protective immune responses.
AUTHOR: Haynes J.R.; Fuller D.H.; Eisenbraun M.D.; Ford M.J.; Pertmer T.M.
CORPORATE SOURCE: Agracetus, Inc., 8520 University Green,Middleton, WI 53562, United States
SOURCE: AIDS Research and Human Retroviruses, (1994) 10/SUPPL. 2 (S43-S45).
ISSN: 0889-2229 CODEN: ARHRE7
COUNTRY: United States
DOCUMENT TYPE: Journal; Conference Article
FILE SEGMENT: 026 Immunology, Serology and Transplantation
027 Biophysics, Bioengineering and Medical Instrumentation
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Accell.RTM. particle-mediated gene delivery technology was employed for the intracellular delivery of antigen-encoding expression vectors in epidermal tissues in laboratory animals. Delivery of plasmid DNA-coated gold microparticles using the Accell gene delivery system resulted in de novo antigen expression in epidermal cells that stimulated the induction of antigen-specific humoral and cytotoxic cellular immune responses. Optimal DNA delivery conditions favoring maximal humoral responses required the delivery of 5 x 107 micron-sized gold particles containing

300 plasmid copies per particle (80 ng of vector total) into a 4-cm2 area of abdominal skin. Comparison of immune responses between animals that received intramuscular injections of relatively large quantities of vector DNA (100 .mu.g) and those that received intracellular deliveries of submicrogram quantities of the same DNA to the epidermis demonstrated that the latter approach was considerably more effective at eliciting strong humoral responses. In addition, cytotoxic cellular immune responses were elicited to HIV-1 gp120 following epidermal delivery of HIV-1 gp160 or gp120 expression constructs. A qualitative shift from predominantly cytotoxic cellular to predominantly humoral immune responses with continued immunization indicated the potential for optimizing delivery conditions to favor specifically one type of response over the other.

L128 ANSWER 35 OF 48 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
ACCESSION NUMBER: 2002-083105 [11] WPIDS
DOC. NO. CPI: C2002-025240
TITLE: New matrix metalloproteinases (MMP) genes and polypeptides, useful for treating diseases or for screening modulators of MMP to treat such diseases, e.g. mental disorders, Parkinson's disease, cancers or inflammatory conditions.
DERWENT CLASS: B04 D16
INVENTOR(S): EKBLOM, J; HOLMGREN, E; KIHLEN, M; WOOD, T
PATENT ASSIGNEE(S): (PHAA) PHARMACIA & UPJOHN CO
COUNTRY COUNT: 96
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2001090326	A2	20011129	(200211)*	EN	94

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2001090326	A2	WO 2001-US16563	20010522

PRIORITY APPLN. INFO: US 2000-206119P 20000522
AB WO 200190326 A UPAB: 20020215
NOVELTY - Isolated polynucleotide (I), comprising a sequence encoding matrix metalloproteinases (MMP), is new. (I) encodes a polypeptide with a sequence homologous to a 513 (II), 259 (III) or 520 (IV) residue amino acid sequence, all fully defined in the specification. (I) encodes at least a portion of MMP, but is not a 999 (V) base pair sequence, fully defined in the specification.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) expression vectors comprising (I);

(2) host cells transformed or transfected with (I) or the expression vector of (1), and that express the MMP protein encoded by the polynucleotide;

(3) an isolated nucleic acid molecule comprising at least 10 nucleotides, the nucleic acid molecule comprising a sequence complementary to at least a portion (VI), (VII) or (VIII);

(4) producing a polypeptide that comprises (II), (III) or (IV), and their homologs, comprising:

(a) introducing the recombinant expression vector into a compatible host cell;

(b) growing the host cell to express the polypeptide; and

(c) recovering the polypeptide;

(5) an isolated polypeptide encoded by (I), provided that the polypeptide does not comprise a 261 residue amino acid sequence, fully defined in the specification;

(6) an isolated antibody that binds to an epitope on the polypeptide of (5);

(7) inducing an **immune response** in a mammal against the polypeptide by administering to the mammal the polypeptide sufficient to induce the **immune response**;

(8) identifying a compound that binds MMP, comprising:

(a) contacting MMP with a compound; and

(b) determining if the compound binds MMP;

(9) identifying a compound that binds a nucleic acid molecule encoding MMP, comprising:

(a) contacting the nucleic acid molecule encoding MMP with a compound; and

(b) determining if the compound binds the nucleic acid molecule;

(10) identifying a compound that modulates the activity of MMP, comprising:

(a) contacting MMP with a compound; and

(b) determining if MMP activity has been modulated;

(11) compounds identified by the methods of (8), (9) and (10);

(12) identifying an animal homolog of MMP comprising:

(a) comparing the nucleic acid sequences of the animal with a sequence consisting of (VI), (VII) or (VIII) and portions of it, the portions being at least 10 nucleotides; and

(b) identifying nucleic acid sequences of the animal that are homologous to (VI), (VII) or (VIII), and portions of it, the portions comprising at least 10 nucleotides;

(13) screening a human subject to diagnose a disorder affecting the brain or a genetic predisposition to it, comprising:

(a) assaying nucleic acid of a human subject to determine a presence or an absence of a mutation altering an amino acid sequence, expression or biological activity of at least one MMP that is expressed in the brain, where the MMP comprises (II), (III) or (IV), and its allelic variants, and where the nucleic acid corresponds to a gene encoding the MMP; and

(b) diagnosing the disorder or predisposition from the presence or absence of the mutation, where the presence of a mutation altering the amino acid sequence, expression, or biological activity of the MMP in the nucleic acid correlates with an increased risk of developing the disorder;

(14) screening for an MMP hereditary mental disorder genotype in a human patient, comprising:

(a) providing a biological sample comprising nucleic acid from the patient, the nucleic acid including sequences corresponding to alleles of MMP; and

(b) detecting the presence of one or more mutations in the MMP allele, where the presence of a mutation in a MMP allele is indicative of a hereditary mental disorder genotype;

(15) a kit for screening a human subject to diagnose a mental disorder or a genetic predisposition for it;

(16) identifying a MMP allelic variant that correlates with a mental disorder;

(17) a purified and isolated polynucleotide comprising a nucleotide sequence encoding a MMP allelic variant identified in (16);

(18) a host cell transformed or transfected with the polynucleotide of (17) or with a vector comprising the polynucleotide;

(19) compositions comprising (I), the recombinant expression vector, the polypeptide or antibody, and a carrier or diluent; and

(20) identifying a modulator of biological activity of MMP, compounds useful for treating a mental disorder or compounds useful as a modulator

of binding between MMP and a binding partner of MMP.

ACTIVITY - Cytostatic; neuroprotective; nootropic; cardiovascular; anti-inflammatory; periodontal; vulnerary; antilipemic; antidiabetic; antipsoriatic.

No biological data is given.

MECHANISM OF ACTION - Gene therapy; matrix metalloproteinases modulators.

USE - The MMP genes are useful for producing MMP polypeptides and for screening modulators of MMP. The MMPs are useful for breaking down extracellular matrix (ECM), which is essential for processes including embryonic development, morphogenesis, reproduction, or tissue repair and remodeling. The MMPs are particularly useful for identifying compounds that modulate the activity of genes to treat pathologies, e.g. mental disorders (All claimed) Alzheimer's disease, multiple sclerosis, Parkinson's disease or motoneuron disease. The MMP polypeptides and genes, as well as their modulators, are useful for treating metabolic diseases and disorders (e.g. type 2 diabetes, obesity, cardiovascular, dyslipidemias, adipogenesis, retinopathies, neuropathies or nephropathies), proliferative diseases and cancers (e.g. breast, colon or lung cancer, tumor growth, tumor invasion, psoriasis or prostate hyperplasia), hormonal disorders (e.g. male/female hormonal replacement, polycystic ovarian syndrome or alopecia), central nervous system (CNS) disorders, inflammatory conditions (e.g. Crohn's disease or arthritis), periodontal diseases or wound healing. The host cells are particularly useful for large-scale production of MMPs.

Dwg.0/0

L128 ANSWER 36 OF 48 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
ACCESSION NUMBER: 2002-041480 [05] WPIDS
DOC. NO. CPI: C2002-011820
TITLE: Use of nucleic acid sequence which encodes influenza **virus** M2 antigen and which is not present in a recombinant viral vector, for manufacture of medicament for **vaccination** against an influenza **virus.**
DERWENT CLASS: B04 D16
INVENTOR(S): HAYNES, J R; MACKLIN, M D; PAYNE, L G
PATENT ASSIGNEE(S): (POWD-N) POWDERJECT RES LTD; (POWD-N) POWDERJECT VACCINES INC
COUNTRY COUNT: 94
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2001083528	A2	20011108	(200205)*	EN	69

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2001083528	A2	WO 2001-GB1924	20010501

PRIORITY APPLN. INFO: US 2000-210580P 20000608; US 2000-200968P 20000501; US 2000-561951 20000501

AB WO 200183528 A UPAB: 20020123

NOVELTY - Use of a nucleic acid sequence (I) that encodes an influenza

virus M2 antigen, where (I) is not present in a recombinant viral vector, for the manufacture of a medicament for **vaccination** against an influenza **virus**.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) a polynucleotide **vaccine** composition (II) comprising (I);

(2) a particle acceleration device (III) suitable for use in a nucleic acid immunization technique, where (III) is loaded with (II) which is in a particulate form;

(3) a method (M1) for using an influenza **virus** M2 antigen to induce an immune response in a subject, involves obtaining a nucleic acid sequence encoding the M2 antigen, providing an expression cassette by linking the nucleic acid sequence to regulatory sequences such that the nucleic acid sequence is operatively linked to control sequences that direct expression of the M2 antigen when introduced into tissue of the subject, where the expression cassette is not present in a recombinant viral vector, and administering the expression cassette to tissue of the subject; and

(4) eliciting (M2) a protective immune response in a subject, involves transfecting cells of the subject with a polynucleotide encoding an influenza **virus** M2 antigen, where the transfection is carried out under conditions that permit expression of the antigen within the subject, and the polynucleotide is not present in a recombinant viral vector, and its expression is sufficient to elicit a protective immune response against an influenza **virus**.

ACTIVITY - Virucide.

MECHANISM OF ACTION - **Vaccine**; elicitor of M2-specific immune response (claimed). Induction of M2-specific antibody responses in mice were tested. Six mice received three consecutive particle-mediated **DNA** immunizations at four week intervals in which each immunization consisted of two particle-mediated deliveries of pM2-FL **DNA coated gold** particles. Each delivery contained 0.5 mg of **gold** and 11.0 mu g of **DNA** for a total of 1 mg of gold and 2.0 mu g of **DNA** per immunization. The mice immunized were anesthetized two weeks following the final immunization and were challenged intranasally with 1 multiply 105 plaque forming units of mouse-adapted A/Aichi/2/68 (H3N2) which was 10 times the lethal dose for mice. The results showed that while all control animals died by day 7, 100% survival was seen in the M2 **DNA** **vaccine** test group.

USE - (I) is useful for the manufacture of a medicament for **vaccination** against an influenza **virus**. (II) is useful for eliciting an immune response against an influenza **virus** in a subject, by administering (II) to the subject, where upon introduction to the subject, the nucleic acid sequence is expressed to provide the influenza **virus** M2 antigen in an amount sufficient to elicit the immune response. (II) is combined with a pharmaceutically acceptable vehicle and is administered to the subject in the form a liquid. The method further comprises administering a second **vaccine** composition to the subject. The second **vaccine** composition is an anti-influenza **vaccine** selected from a whole **virus** **vaccine**, a subunit **vaccine**, a split **vaccine**, a nucleic acid **vaccine**, and their combinations. The second **vaccine** composition is administered to the subject in a boosting step. (II) and the second **vaccine** composition are administered to the same site in the subject, and are administered concurrently. (II) and the second **vaccine** composition are combined to provide a single composition (claimed). (II) is useful for treating influenza **virus** infection. (II) is useful as standalone **vaccines**, or as a part of a multi-**vaccine** composition.

ADVANTAGE - (II) is an effective **vaccine** for immunization against infection with influenza **virus**.

Dwg.0/5

L128 ANSWER 37 OF 48 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
ACCESSION NUMBER: 2002-010909 [01] WPIDS
DOC. NO. CPI: C2002-002733
TITLE: Novel variant DNA sequence useful in DNA **vaccine** , encodes naturally occurring protein and comprises a sequence non-identical to naturally occurring DNA sequence encoding the protein.
DERWENT CLASS: B04 D16
INVENTOR(S): COX, V F; STEWARD, M
PATENT ASSIGNEE(S): (ADPR-N) ADPROTECH LTD
COUNTRY COUNT: 95
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2001077324	A1	20011018 (200201)*		EN	87

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2001077324	A1	WO 2001-GB1599	20010409

PRIORITY APPLN. INFO: GB 2000-8582 20000408
AB WO 200177324 A UPAB: 20020105
NOVELTY - A variant DNA sequence (I) for use in a DNA **vaccine**, where (I) encodes a naturally occurring protein which, by virtue of third base redundancy and other variations permissible within an amino acid codon, is non-identical to the naturally occurring DNA sequence encoding that protein, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) a linear concatamer (II) of (I) encoding murine, human or non-human primate C3d oligomers, and optionally including not more than one wild-type sequence encoding murine, human or other mammalian C3d;

(2) a vector (III) comprising (I) or (II);

(3) a pharmaceutical composition (IV) comprising (I), (II) or (III);

(4) a DNA immunization vector (V) comprising (I) or (II), fused to one or more DNA sequences encoding an antigen;

(5) an isolated DNA sequence (VI) which comprises a sequence of 888 base pairs fully defined in the specification, where (VI) encodes rhesus macaque C3d protein;

(6) a DNA sequence (VII) which is a homolog of (I), (II) or (VI), where the homolog differs in sequence by virtue of the addition, deletion or substitution of one or more nucleotides at one or more points or sections of the sequence, where the homolog DNA sequence encodes a C3d protein; and

(7) preparing (M) an oligomeric polypeptide in vitro or in vivo, where the oligomeric polypeptide is a protein or its fragment, involves constructing (III) encoding the polypeptide and introducing into a recombinant host cell in vitro or host organism in vivo and providing conditions under which the polypeptide will be expressed, where (M) involves preparing a replicable expression vector comprising (I) or (II) that encodes the polypeptide, transforming a host cell with the vector,

culturing the transformed host cell under conditions permitting replication of the expression vector or to produce the polypeptide, and recovering the expression vector in a form suitable for DNA immunization or the polypeptide in an active form.

ACTIVITY - Immunostimulant.

MECHANISM OF ACTION - **Vaccine**.

Mice were immunized with **DNA** immunization vectors encoding murine C3d fused to antigens. The recombinant **DNA** immunization vector encoding the murine C3d oligomer-antigen fusions were used to immunize mice. Immunizations were performed using the BioRAD Helios Gene Gun. The **plasmid DNA** was precipitated onto **gold** microcarriers in the presence of spermidine, and the **gold** was **coated** onto the inside of **gold-coat** tubing. A single sample of **gold-DNA** complex was delivered to the shaved abdomen of mice. A second immunization was performed 6 weeks after the initial boost. The results showed that vectors encoding more than a single copy of C3d were found to have enhanced humoral immune responses to the antigen encoded as a fusion to the C3d concatamer. Vectors in which the C3d sequences were non-identical to wild type C3d showed a reduced frequency of integration into the genome in comparison with vectors containing wild-type murine C3d.

USE - (I) is useful in a DNA **vaccine**. (I) or (II) is useful in a DNA immunization vector to encode one or more naturally occurring human or non-human proteins with immunomodulatory properties. (II) is useful in a DNA immunization vector for use in murine or primate immunization models or for human immunization, where (II) is fused to one or more DNA sequences encoding an antigen. (I), (II) or (III) is useful for inducing an immune response to an antigen in a human or animal. (IV) is useful for introducing a DNA sequence encoding a naturally occurring protein into a human or animal by administering (IV) into the human or animal, where the administration results in a therapeutic effect on the human or animal (claimed).

Dwg.0/0

L128 ANSWER 38 OF 48 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
ACCESSION NUMBER: 2001-418023 [44] WPIDS
DOC. NO. CPI: C2001-126376
TITLE: Novel nucleic acid **vaccine** construct for **vaccinating** mammals against tumors, comprising a polynucleotide which when expressed in mammalian cell, expresses a polypeptide with altered glycosylation site.
DERWENT CLASS: B04 C06 D16
INVENTOR(S): CROWE, J S; ELLIS, J H
PATENT ASSIGNEE(S): (GLAX) GLAXO GROUP LTD
COUNTRY COUNT: 94
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2001046228	A2	20010628	(200144)*	EN	37

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

AU 2001022049 A 20010703 (200164)

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2001046228	A2	WO 2000-GB4906	20001220

AU 2001022049 A 55 AU 2001-22049 20001220

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2001022049 A	Based on	WO 200146228

PRIORITY APPLN. INFO: GB 1999-30359 19991222

AB WO 200146228 A UPAB: 20010809

NOVELTY - A nucleic acid **vaccine** construct (I) comprising an isolated polynucleotide (II) encoding a polypeptide (III) comprising at least five consecutive amino acids from the VNTR monomer of Muc1 (cell mucin), where one or more of the amino acids is a glycosylation site (GS).

DETAILED DESCRIPTION - A nucleic acid **vaccine** construct (I) comprising an isolated polynucleotide (II) encoding a polypeptide (III) comprising at least five consecutive amino acids from the VNTR monomer of Muc1 (cell mucin), where one or more of the amino acids is a glycosylation site (GS), such that when (II) is expressed in a mammalian cell, glycosylation of the resulting polypeptide is altered or prevented at least one of GSs.

An INDEPENDENT CLAIM is also included for a **vaccine** composition (IV) comprising (I).

ACTIVITY - Cytostatic.

MECHANISM OF ACTION - **Vaccine** (claimed); gene therapy.

Plasmid DNA was precipitated on 2 micro m diameter **gold** beads using calcium chloride and spermidine. Loaded beads were **coated** onto Tefzel tubing. Particle bombardment was performed using the Accell gene delivery system. For each **plasmid**, five female C56BI/6 mice were immunized with 3 administrations of **plasmid** on days 0, 21 and 42. Serum samples were obtained from the animals by venepuncture on days 1, 20, 41 and 55, and assayed by ELISA (enzyme linked immunoabsorbant assay) for the presence of anti-MUC1 antibodies. The results demonstrated that glycosylation mutant sequences were effective as **vaccines** to elicit immune responses capable of recognizing the wild-type MUC1 sequence.

USE - (I) and (II) are useful for **vaccination** of a mammal against tumors e.g., epithelial cell tumors or breast cancer tumors. (II) is useful in the manufacture of a medicament for use in **vaccination** of a mammal against tumors (claimed).

ADVANTAGE - (I) comprises polynucleotides encoding polypeptides that retain conformation of MUC1 epitopes, an essential requirement for continued immunogenicity of the altered polypeptides, and which have reduced glycosylation, hence resembling more closely the form of MUC1 expressed on tumors.

Dwg.0/10

L128 ANSWER 39 OF 48 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
ACCESSION NUMBER: 2001-408540 [43] WPIDS
DOC. NO. CPI: C2001-123734
TITLE: Protecting animal against lethal infection with Bacillus anthracis, by administering wildtype or mutated form of Bacillus anthracis lethal factor protein or its fragment or a nucleic acid encoding the mutated protein.
DERWENT CLASS: B04 C06 D16
INVENTOR(S): GALLOWAY, D R; MATECZUN, A J
PATENT ASSIGNEE(S): (GALL-I) GALLOWAY D R; (MATE-I) MATECZUN A J; (OHIS) UNIV OHIO STATE RES FOUND
COUNTRY COUNT: 86
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG

WO 2001045639 A2 20010628 (200143)* EN 33
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW
AU 2001027329 A 20010703 (200164)

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2001045639 A2		WO 2000-US34912	20001221
AU 2001027329 A		AU 2001-27329	20001221

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2001027329 A	Based on	WO 200145639

PRIORITY APPLN. INFO: US 1999-171459P 19991222

AB WO 200145639 A UPAB: 20010801
NOVELTY - Inducing an immune response which protects an animal against lethal injection with Bacillus anthracis, comprising administering an immunogenic composition containing purified or recombinant B. anthracis lethal factor (LF) protein or its immunogenic fragment or a nucleic acid which encodes a mutated LF protein operably linked to a promoter which drives expression of mutated LF protein.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for an immunogenic composition for preparing a **vaccine** which protects a subject against a lethal infection of B. anthracis, comprising a purified or recombinant LF protein or its fragment or a polynucleotide which encodes a mutated LF protein or its immunogenic fragment.

ACTIVITY - Antibiotic.

MECHANISM OF ACTION - **Vaccine.**

Induction of a protective immune response against challenge with B. anthracis toxin by co-administration of **DNA plasmid** encoding an immunogenic fragment of LF and **DNA plasmid** encoding a fragment of PA was studied. Separate groups of female BALB/c mice at 4-5 weeks in age were immunized intradermally (i.d.) in days 0, 14, and 28 with 1 micro g **plasmid DNA coated** onto **gold** particles. The eukaryotic expression **plasmid** pCI was used to prepare a construct for the expression of a truncated version of the LF protein. The gene fragment encoding amino acids 175-735 of the PA protein was polymerase chain reaction (PCR) amplified using specific primers and pYS2 as a template. PA gene fragment was expressed as the PA63 protease-cleaved fragment of the full-length 83 kDa protein. The PCR reaction product was digested with XhoI and Xba and ligated into the pCI vector. Immunization groups included the pCPA (which expresses a truncated version of the PA gene product which is the PA63 antigen lacking the furin cleavage site), pCLF4 (which expresses a truncated form of LF which lacks the catalytic domain of LF, yet retains PA63 binding activity), a 1:1 mixture of the pCPA and pCLF4 **plasmids** and the pCI **plasmid** as a vector control. **Plasmid**-immunized BALB/c mice which had received a total of three injections were challenged with purified lethal toxin two weeks following the third and final injection. The challenge was conducted by tail vein injection of a previously mixed combination of purified PA and LF proteins (60 micro g PA and 25-30 micro g LF/mouse) which is equivalent to 5xLD50 dose of lethal toxin. Antibody titers against PA were determined. The results showed that co-immunization with the pCPA and pCLF4 **plasmids** resulted in

significantly higher overall antibody response against either the PA or LF antigens when compared to the antibody response following separate immunization with either gene alone. All animals **plasmid** -immunized against either PA or LF survived. Control mice succumbed to the lethal toxin challenge within hours.

USE - The method is useful for protecting an animal against lethal infection with B. anthracis (claimed).

ADVANTAGE - Using a DNA **vaccine** which encodes the mutated LF protein or fragment alone or in combination with a DNA encoding the PA protein or its fragment, both components (humoral and cell-mediated) of the immune system are stimulated, which results in longer term immune memory response. The combined use of a mutated LF and PA gene or their fragments results in a higher level of immune response, as judged by overall serum antibody titers for LF and PA antigens, than the use of either LF or PA genes in separate immunizations. DNA-based formulations for immunization are less expensive to produce, store and administer, since they do not require the expression and/or purification of proteins. Also, they contain less possible components to contribute to side effects and can be made highly specific and are easily manipulated at the genetic level to effect changes or modify the original composition for improvement of the immune response. The DNA based formulations are readily amenable to a variety of delivery mechanisms, thus constituting a more versatile immunogenic system.

Dwg.0/6

L128 ANSWER 40 OF 48 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
ACCESSION NUMBER: 2001-343403 [36] WPIDS
DOC. NO. NON-CPI: N2001-248696
DOC. NO. CPI: C2001-106299
TITLE: Novel composition for inducing an enhanced **immune response** against a selected antigen, comprising a nucleic acid encoding the antigen and an adjuvant present in a form other than DNA in the composition.
DERWENT CLASS: B04 D16 P34
INVENTOR(S): FULLER, D; FULLER, J T; HAYNES, J R; SHIPLEY, T; WIDERA, G; WU, M
PATENT ASSIGNEE(S): (POWD-N) POWDERJECT VACCINES INC
COUNTRY COUNT: 89
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2001032208	A1	20010510	(200136)*	EN	61

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ TZ UG ZW
W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZW

AU 2000013399 A 20010514 (200149)

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2001032208	A1	WO 1999-US25854	19991103
AU 2000013399	A	WO 1999-US25854	19991103
		AU 2000-13399	19991103

FILING DETAILS:

PATENT NO	KIND	PATENT NO

AU 2000013399 A Based on WO 200132208

PRIORITY APPLN. INFO: WO 1999-US25854 19991103

AB WO 200132208 A UPAB: 20010628

NOVELTY - A composition (C) comprising a nucleic acid molecule (I) comprising a sequence encoding an antigen, and an adjuvant, which is effective to enhance at least one component of an **immune response** elicited against the antigen and is not DNA, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) coated particles (II) for use in particle-mediated nucleic acid immunization, which comprise core carrier particles coated with (C);

(2) a particle acceleration device (III) suitable for particle-mediated nucleic acid immunization, loaded with (II); and

(3) eliciting (M1) an **immune response** against a selected antigen in an individual comprising:

(a) delivering (I) to cells present at a target site; and

(b) administering an immune shift adjuvant which can shift the antigen specific **immune response** to a T helper 1 (Th1)- or Th2-type response, to the target site.

ACTIVITY - None given.

MECHANISM OF ACTION - DNA **Vaccine**.

Anaesthetized 6-8 week old Balb/c mice were administered with single dose of **DNA**-coated carrier particles, into the epidermis. Each site received 1 micro g of **DNA** on 0.5 mg **gold carrier** particles, with varying amounts of monophosphoryl lipid A (MPL), and each animal having two sites. 4 weeks after the treatment, sera samples were obtained from the immunized animals and carcino embryonic antigen (CEA)-specific antibodies (IgG and IgG2a) were quantified using an enzyme-linked immunosorbent assay (ELISA) kit. **Immune responses** for animals which received no MPL were predominantly Th2-like, with an average of 27.5 times more IgG1 type antibodies as compared to IgG2a antibodies. The greatest change in the nature of the immunological response in the treated animals was at a rate of 0.2 mg/ml MPL, where the ratio of IgG1 to IgG2a had been reduced to 4.5.

USE - (C) is useful in the manufacture of a medicament for use in nucleic acid immunization , and for eliciting an **immune response** against a selected antigen in an individual, by delivering (C) directly into cells present at a target site e.g., epidermal tissue, using a particle-mediated delivery technique in the individual to bring about the **immune response** (all claimed).

(I) is useful for eliciting an **immune response** against a selected antigen in an individual, by delivering (I) directly to cells present at a target site in the individual, where the nucleic acid molecule contains a sequence that is expressed within the cells to produce the selected antigen at sufficient levels to elicit an antigen-specific **immune response** in the individual, and administering an immune shift adjuvant to the target site, where the adjuvant is administered to shift the antigen-specific **immune response** towards a T helper 1 (Th1)-type or a T helper (Th2)-type response (claimed).

ADVANTAGE - (C) represents a significant departure from previous DNA **vaccine** compositions that may combine antigen coding sequences with adjuvant coding sequences: by introducing the DNA directly into cells as particles, extracellularly delivered DNA is not degraded as it is with standard procedures. Smaller amounts of DNA are therefore required. The purposeful delivery of the non-DNA adjuvant into a target cell is counter-intuitive, since adjuvants are known to operate on an extracellular basis, e.g., by forming an extracellular depot and it is when the moieties are present in the extracellular realm that immune competent cells can encounter and interact with the adjuvant to bring about a desired adjuvant effect. The adjuvant component can be provided in

a number of different forms.
Dwg.0/1

L128 ANSWER 41 OF 48 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
ACCESSION NUMBER: 2001-335683 [35] WPIDS
DOC. NO. CPI: C2001-103677
TITLE: New **vaccines** containing avirulent or attenuated microbes, useful for enhancing protective immunity against, or for attenuating or reducing the severity of an infection or disease caused by bacteria, e.g. Mycobacterium tuberculosis.
DERWENT CLASS: B04 D16
INVENTOR(S): HARRISON, R J; MURPHY, J R; O'LEAR, E
PATENT ASSIGNEE(S): (ADMI-N) ADVANCED MICROBIAL SOLUTIONS CORP
COUNTRY COUNT: 94
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2001030384	A1	20010503	(200135)*	EN	54

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

AU 2001011017 A 20010508 (200149)

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2001030384	A1	WO 2000-US29231	20001023
AU 2001011017	A	AU 2001-11017	20001023

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2001011017	A Based on	WO 200130384

PRIORITY APPLN. INFO: US 1999-161292P 19991025; US 1999-161193P 19991022

AB WO 200130384 A UPAB: 20010625
NOVELTY - A virulent or opportunistic prokaryote (I) in which metal ion-independent gene regulation confers a growth or an infectious advantage, is new. The prokaryote is transformed with a DNA molecule encoding a dominant, metal ion-independent repressor protein or a partially metal ion-independent repressor protein. The DNA molecule is expressed in the prokaryote.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) a composition comprising (I);

(2) an isolated and purified DNA molecule (II) consisting essentially of a sequence encoding a metal ion independent or a partially metal ion independent diphtheria toxin repressor (DtxR) or its homologue;

(3) a recombinant DNA molecule containing a constitutive promoter element in operable association with (II);

(4) a recombinant vector comprising a promoter element in operable association with (II);

(5) a method of enhancing protective immunity against infection or disease caused by the opportunistic or virulent prokaryotic pathogen comprising administering to an animal the composition; and

(6) a method of attenuating or reducing the severity of an infection or disease caused by the opportunistic or virulent prokaryotic pathogen comprising administering to an animal the composition (I).

ACTIVITY - Antibacterial. Forty-eight 6-8-week old BALB/c mice were infected by tail vein injection with 2 multiply 105 organisms of wild type M. tuberculosis or M. tuberculosis DtxR(E175K). Bacterial infection was monitored over a 119-day period. Results showed that mice infected with wild type M. tuberculosis began to lose weight beginning at 13 weeks, while the M. tuberculosis DtxR(E175K)-infected animals initially gained weight, then maintained stable weights for the duration of the experiment.

MECHANISM OF ACTION - **Vaccine.**

USE - The composition is useful for enhancing protective immunity against infection or disease caused by the opportunistic or virulent pathogen in an animal. The composition is also useful for attenuating or reducing the severity of the infection or disease in animal. In particular, the animal is a human (all claimed).

Dwg.0/9

L128 ANSWER 42 OF 48 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
ACCESSION NUMBER: 2001-257928 [26] WPIDS
DOC. NO. CPI: C2001-077749
TITLE: Novel **vaccine** for treating autoimmune diseases, contains a polynucleotide comprising a promoter specifically active in antigen presenting cells and operatively linked to it, and polynucleotide encoding antigen.
DERWENT CLASS: B04 C06 D16
INVENTOR(S): BROCKER, T
PATENT ASSIGNEE(S): (BROC-I) BROCKER T
COUNTRY COUNT: 94
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2001021199	A1	20010329	(200126)*	EN	53

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

AU 2000077810 A 20010424 (200141)

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2001021199	A1	WO 2000-EP9305	20000922
AU 2000077810	A	AU 2000-77810	20000922

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2000077810	A Based on	WO 200121199

PRIORITY APPLN. INFO: EP 2000-111993 20000620; EP 1999-118809 19990923

AB WO 200121199 A UPAB: 20010515
NOVELTY - A **vaccine** (I) containing a nucleic acid molecule comprising a promoter that is specifically active in antigen presenting cells and operatively linked to it, and a nucleic acid sequence encoding an antigen, is new.

ACTIVITY - Antibacterial; virucide; antiallergic; antitumor; immunosuppressive.

Modification of the immune response by dendritic cell (DC)-specific coexpression of antigen and OX40L after intramuscular administration of DNA-**vaccines**, was tested. To investigate the feasibility of DNA-**vaccine** driven coexpression of immunologically active molecules and their qualitative influence on the antibody response, OX40L, a member of the TNF (tumor necrosis factor) family, believed to shift immune responses towards a TH2 type, was chosen. The cDNA encoding OX40L was cloned into the expression cassette of the CD11c-vector. This construct was mixed with the CD11c-HA **plasmid** and injected into the hind legs of BALB/c mice. As a control, the second group of mice received the same CD11c-HA vector mixed with CD11c- beta 2M. CD11c- beta 2M encoded beta -2-Microglobulin (beta 2M), a molecule which does not affect the immune response (the mixture CD11c-HA + CD11c- beta 2M induces the same immune response as CD11c-HA alone). Mice were immunized 3 times in 3 week periods and the sera were analyzed. The control group mounted an (hemagglutinin) HA-specific antibody response of a Th1-type, dominated by IgG2a antibodies. In contrast, when the **plasmid** mixture CD11c-HA + CD11c-OX40L was injected, the response was more equilibrated, since the TH2-type (IgG1)-antibody production was promoted. As compared to the control group, the TH1 response was relatively low, but not completely suppressed.

MECHANISM OF ACTION - **Vaccine** (claimed).

USE - (I) is useful for **vaccinating** a mammal, preferably a human (claimed). (I) is useful for preventing or treating a variety of conditions or for biasing the immune response, for preventing **virus**, bacterial or parasite infections, and for treating or preventing allergies, autoimmune conditions, and tumors. (I) is also useful for the production of monoclonal antibodies.

ADVANTAGE - (I) induces potent **vaccination** effect after a single intramuscular **vaccination**, when compared to conventional DNA-immunization, where several booster immunizations are necessary. The levels of antigen-specific serum titers in mice immunized with (I) is more than one magnitude higher as compared to a conventional DNA-**vaccine** with ubiquitous expression specificity. (I) greatly enhances DNA-**vaccine** efficiency by inducing specific antibody titers comparable to protein immunizations.

Dwg.0/10

L128 ANSWER 43 OF 48 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
ACCESSION NUMBER: 2001-007014 [01] WPIDS
DOC. NO. CPI: C2001-001688
TITLE: Composition comprising recombinant nucleic acid molecule comprising a nucleic acid sequence encoding peptide mimic of target antigen, used as DNA **vaccines** to immunize humans against target antigens by gene therapy.
DERWENT CLASS: B04 D16
INVENTOR(S): CHEN, D; FULLER, J T
PATENT ASSIGNEE(S): (POWD-N) POWDERJECT VACCINES INC
COUNTRY COUNT: 91
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2000063385	A2	20001026	(200101)*	EN	45

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

AU 2000044797 A 20001102 (200107)

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2000063385 A2		WO 2000-US10766	20000421
AU 2000044797 A		AU 2000-44797	20000421

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 2000044797 A		Based on	WO 200063385

PRIORITY APPLN. INFO: US 1999-130249P 19990421

AB WO 200063385 A UPAB: 20001230

NOVELTY - A composition (I) comprising a recombinant nucleic acid molecule (II) that contains first nucleic acid sequence (N1) encoding a peptide mimic of a target antigen. Optionally (I) comprises a second nucleic acid molecule (N2) that encodes the peptide carrier molecule, in which (N1) and (N2) are linked together to form a hybrid sequence and combined with a carrier or excipient.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) the use of (II) comprising (N1) and optionally (N2) in the manufacture of a polynucleotide medicament for eliciting an **immune response** against an agent comprising the target antigen;

(2) particles (III) suitable for transdermal injection by means of a needleless syringe comprising carrier particles coated with (II) containing (N1);

(3) a single unit dosage or multidose container adapted for use in a needleless syringe containing (III); and

(4) a needleless syringe loaded with (III).

ACTIVITY - Antibacterial; antiviral.

MECHANISM OF ACTION - **Immune response** elicitors; in vivo or ex vivo gene therapy; **vaccine**. The biological activity of (II) was tested in mice. Female Balb/C mice of 7 weeks of age were **vaccinated** on days 0, 21, and 50 with 1 micro g of MP-MCP DNA using the powder jet XR gene gun device. Six control mice were **vaccinated** with control vector encoding hepatitis B core antigen without the peptide mimic insert. All mice were boosted IP with 5 micro g of meningococcal group C polysaccharide (MCP) on day 80. Blood samples were collected via retro-orbital bleeding. The antibody response following DNA **vaccination** was determined by ELISA using MCP. **Vaccinations** with the DNA **vaccine** alone did not elicit detachable IgG antibodies. All mice responded to MCP boost with high IgG titers one week post-boost and the titer was maintained for two weeks without change, suggesting adequate prime by the DNA **vaccination** . Control mice primed with the control vector encoding only hepatitis B core antigen then boosted with MCP had virtually no IgG titer at any time point examined.

USE - (II) is useful for eliciting an **immune response** against a bacterial antigen, preferably bacterial polysaccharide such as pneumococcal type 4 polysaccharide or meningococcal group C polysaccharide of Neisseria menigitidis, Streptococcus pneumoniae, and Haemophilus influenzae in humans. The method involves transfecting cells of the subject with (II). Transfection (carried out in vivo by using a particle mediated transfection technique or ex vivo to obtain transfected cells which are subsequently introduced into the subject) is carried out under conditions that permit the expression of the molecule comprising the peptide mimic within the subject and the expression is sufficient to elicit an **immune response** against the target antigen (claimed).

ADVANTAGE - The recombinant nucleic acid molecules can be used as reagents in nucleic acid immunization strategies to attain a qualitatively and quantitatively superior **immune response** to particular antigens, particularly polysaccharide antigens. The **vaccine** compositions that encode a peptide mimic of a target antigen can be used to **vaccinate** subjects of all ages, particularly young children who are typically non-response to conventional **vaccine** compositions such as polysaccharide-based compositions. Since the peptide mimics are chemically different from their corresponding target antigens, they may avoid inappropriate immune reactions in immunized subjects, such as those situations where a natural or native form of the antigen could cause auto-reactive antibody production. The DNA based peptide mimic **vaccines** are simply and accurately producible, and that multiple peptide mimic coding sequences can be provided in a single molecule. These peptide mimic nucleic acid **vaccine** compositions also are able to convert T-independent polysaccharide into a T-dependent peptide antigen, thus eliciting a long-lasting IgG response with memory immunity.
Dwg.0/1

L128 ANSWER 44 OF 48 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
ACCESSION NUMBER: 2000-452400 [39] WPIDS
CROSS REFERENCE: 2000-452401 [39]; 2000-465745 [39]
DOC. NO. CPI: C2000-137949
TITLE: Expression cassettes encoding the human immunodeficiency **virus** (HIV) Gag-containing polypeptide useful for **vaccinating** against HIV infections and acquired immunodeficiency syndrome (AIDS).
DERWENT CLASS: B04 C06 D16
INVENTOR(S): BARNETT, S; GREER, C; HARTOG, K; LIAN, Y; LIU, H; SELBY, M; SRIVASTAVA, I; WALKER, C; ZUR MEGEDE, J
PATENT ASSIGNEE(S): (CHIR) CHIRON CORP
COUNTRY COUNT: 90
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2000039302	A2	20000706	(200039)*	EN	390
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ TZ UG ZW					
W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW					
AU 2000022216	A	20000731	(200050)		
EP 1141313	A2	20011010	(200167)	EN	
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI					

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2000039302	A2	WO 1999-US31245	19991230
AU 2000022216	A	AU 2000-22216	19991230
EP 1141313	A2	EP 1999-966727	19991230
		WO 1999-US31245	19991230

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2000022216	A Based on	WO 200039302

EP 1141313 A2 Based on WO 200039302

PRIORITY APPLN. INFO: US 1999-168471P 19991201; US 1998-114495P 19981231

AB WO 200039302 A UPAB: 20011119
NOVELTY - Synthetic expression cassettes comprising nucleic acids encoding the human immunodeficiency **virus** (HIV) Gag-containing polypeptide, are new.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the following:
(1) an expression cassette (I) comprising a polynucleotide sequence encoding a protein comprising a human immunodeficiency **virus** (HIV) Gag polypeptide (the polynucleotide sequence encoding the Gag polypeptide comprises a sequence with at least 90% sequence identity to a defined 60 nucleotide sequence (N1) given in the specification);
(2) a recombinant expression system (II) for use in a host cell comprising (I) operably linked to control elements suitable or protein expression in the host;
(3) a cell (III) comprising (II);
(4) a method (IV) for producing polypeptides including HIV Gag polypeptide sequences, comprising incubating (III) under conditions suitable for expression of the polypeptide;
(5) a method (V) for producing **virus**-like particles (VLPs), comprising incubating (III) under conditions suitable for production of VLPs; and
(6) a method (VI) for DNA **vaccination** of a subject, comprising introducing (II) into a subject under conditions suitable for gene expression.
ACTIVITY - Anti-HIV.
MECHANISM OF ACTION - **Vaccine.**
USE - The expression cassettes may be used for the recombinant expression of HIV Gag-polypeptides which may then be used to **vaccinate** against HIV infection and acquired immunodeficiency syndrome (AIDS).
Dwg.0/82

L128 ANSWER 45 OF 48 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
ACCESSION NUMBER: 2000-339691 [29] WPIDS
DOC. NO. CPI: C2000-103144
TITLE: Minimal promoter sequence lacking an enhancer, useful for expressing polypeptides in mammalian cells for efficient gene therapy.
DERWENT CLASS: B04 C06 D16
INVENTOR(S): FULLER, J T
PATENT ASSIGNEE(S): (POWD-N) POWDERJECT VACCINES INC
COUNTRY COUNT: 86
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2000023592	A2	20000427	(200029)*	EN	33
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ TZ UG ZW					
W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW					
AU 2000017073	A	20000508	(200037)		
EP 1123396	A2	20010816	(200147)	EN	
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI					

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2000023592	A2	WO 1999-US24694	19991019
AU 2000017073	A	AU 2000-17073	19991019
EP 1123396	A2	EP 1999-960139	19991019
		WO 1999-US24694	19991019

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 2000017073	A	Based on	WO 200023592
EP 1123396	A2	Based on	WO 200023592

PRIORITY APPLN. INFO: US 1998-104871P 19981019

AB WO 200023592 A UPAB: 20000617
NOVELTY - A purified minimal promoter sequence (I) lacking an enhancer, is new.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:
(1) a nucleic acid construct (II) comprising (I) operably linked to a coding sequence;
(2) a vector comprising (II);
(3) a method for obtaining expression of a polypeptide in mammalian cells comprising transferring (II) into the cells;
(4) coated particles for immunization comprising carrier particles coated with (I) operably linked to a sequence encoding an antigen; and
(5) a particle acceleration device loaded with the particles of (4).
ACTIVITY - None given.
MECHANISM OF ACTION - Gene therapy or **vaccine**.
USE - (II) is useful for expressing polypeptides in mammalian cells for gene therapy.
ADVANTAGE - A nucleic acid **vaccine** composition which incorporates (I) provides an improved immunological response and more efficient gene therapy.
Dwg.0/4

L128 ANSWER 46 OF 48 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
ACCESSION NUMBER: 2000-257072 [22] WPIDS
DOC. NO. NON-CPI: N2000-191071
DOC. NO. CPI: C2000-078631
TITLE: Assessing an **immune response** against a selected agent in an individual comprises accelerating a particulate composition, containing an immunogenic compound from a selected agent, into the target skin site of the individual.
DERWENT CLASS: B04 D16 S03
INVENTOR(S): FULLER, D L; ROBERTS, L K; SARPHIE, D F
PATENT ASSIGNEE(S): (POWD-N) POWDERJECT RES LTD
COUNTRY COUNT: 88
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2000014547	A1	20000316	(200022)*	EN	39
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ UG ZW					
W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZA ZW					
AU 9957510	A	20000327	(200032)		

EP 1110091 A1 20010627 (200137) EN
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2000014547	A1	WO 1999-GB2915	19990903
AU 9957510	A	AU 1999-57510	19990903
EP 1110091	A1	EP 1999-944686	19990903
		WO 1999-GB2915	19990903

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 9957510	A	Based on	WO 200014547
EP 1110091	A1	Based on	WO 200014547

PRIORITY APPLN. INFO: US 1999-139045P 19990610; US 1998-99261P 19980904

AB WO 200014547 A UPAB: 20000508
NOVELTY - A method using an immunogenic compound from a selected agent in the manufacture of a particulate composition for assessing an **immune response** against the selected agent in an individual, is new.

DETAILED DESCRIPTION - A method using an immunogenic compound from a selected agent in the manufacture of a particulate composition for assessing an **immune response** against the selected agent in an individual, is new. The method comprises:

(a) accelerating the particulate composition into a target skin site in the individual; and

(b) assessing the target site to determine the presence or absence of a localized skin immune reaction, where the presence of the immune reaction is indicative of an **immune response** against the selected agent.

USE - The method is useful for assessing immunocompetence, antibody and cell mediated immunity, antigen exposure, or allergic conditions in an individual by accelerating diagnostic particles into the target skin site of the individual.

ADVANTAGE - The needleless syringe injection is a more sensitive test method than the current standard diagnostic method (the skin prick test).
Dwg.0/0

L128 ANSWER 47 OF 48 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
ACCESSION NUMBER: 2000-681105 [67] WPIDS
DOC. NO. CPI: C2000-207282
TITLE: Compositions to deliver compounds into cells e.g. to treat rheumatoid arthritis, comprise organic halide, targeting ligand and nuclear localization sequence in combination with compound and carrier.
DERWENT CLASS: A96 B07 D16
INVENTOR(S): MCCREERY, T; SADEWASSER, D A; UNGER, E C
PATENT ASSIGNEE(S): (IMAR-N) IMARX PHARM CORP
COUNTRY COUNT: 25
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
EP 1046394	A2	20001025	(200067)*	EN	78

R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 1046394	A2	EP 2000-303249	20000418

PRIORITY APPLN. INFO: US 1999-294623 19990419

AB EP 1046394 A UPAB: 20001223

NOVELTY - Compositions for delivering compounds into cells comprise: an organic halide; a targeting ligand; and a nuclear localization sequence in combination with the compound to be delivered.

ACTIVITY - Immunoregulatory; anti-inflammatory; anti-arthritic.

USE - The compositions are used to deliver compounds into cells (claimed), particularly for the treatment of autoimmune disorders and inflammatory conditions such as rheumatoid arthritis. They may also be used to deliver pharmaceuticals, drugs, diagnostic agents, synthetic organic molecules, peptides, proteins, vitamins, steroids, genetic materials and other bioactive agents e.g. mitotic inhibitors (vinca alkaloids), radiopharmaceuticals (radioactive iodine, phosphorus and cobalt isotopes), hormones (progestins, estrogens, anti-estrogens), anthelmintics, antimalarials, antituberculotics, biologicals (immune sera, antitoxins, antivenoms), rabies prophylactic products, bacterial **vaccines**, viral **vaccines**, aminoglycosides, respiratory products (xanthine derivatives, theophylline, aminophylline), thyroid therapeutics (iodine salts, antithyroid agents), cardiovascular products (chelating agents, mercurial diuretics, cardiac glycosides), glucagons, blood products (parenteral iron, hemin, hematoporphyrins and derivatives), targeting ligands (peptides, antibodies, antibody fragments), biological response modifiers (muramyl dipeptide, muramyl tripeptide, microbial cell wall components, lymphokines - bacterial endotoxin e.g. lipopolysaccharide and macrophage activation factor), subunits of bacteria (Mycobacteria, Comebacteria), synthetic dipeptides (N-acetyl-muramyl-L-alanyl-D-isoglutamine), antifungals (ketoconazole, nystatin, griseofulvin, flucytosine, miconazole, amphotericin B), toxins (ricin), immunosuppressants (cyclosporins), antibiotics (beta -lactam, sulfazecin), hormones (growth hormone, melanocyte-stimulating hormone, estradiol, beclomethasone dipropionate, betamethasone, betamethasone acetate, betamethasone sodium phosphate, betamethasone disodium phosphate, cortisone acetate, dexamethasone, dexamethasone acetate, dexamethasone sodium phosphate, flunisolide, hydrocortisone, hydrocortisone acetate, hydrocortisone cypionate, hydrocortisone sodium phosphate, hydrocortisone sodium succinate, methylprednisolone, methylprednisolone acetate, methylprednisolone sodium succinate, paramethasone acetate, prednisolone acetate, prednisolone sodium phosphate, prednisolone tebutate, prednisone, triamcinolone, triamcinolone acetonide, triamcinolone diacetate, triamcinolone hexacetonide, fluorocortisone acetate, oxytocin, vasopressin and their derivatives), vitamins (cyanocobalamin neionic acid), retinoids and their derivatives (retinal palmitate, alpha -tocopheryl), peptides and enzymes (manganese superoxide dismutase, alkaline phosphatases), anti-allergens (amelexanox), anticoagulants (phenprocoumon, heparin), tissue plasminogen activators, streptokinase and urokinase), circulatory drugs (propranolol), metabolic potentiators (glutathione), antibiotics (p-aminosalicylic acid, isoniazid, capreomycin sulfate, cycloserine, ethambutol hydrochloride, ethionamide, pyrazinamide, rifampicin, streptomycin sulfate dapsone, chloramphenicol, neomycin, ceflacor, cefadroxil, cephalexin, cephadrine erythromycin, clindamycin, lincomycin, amoxicillin, ampicillin, bacampicillin, carbenicillin, dicloxicillin, cyclacillin, picloxicillin, hetacillin, methicillin, nafcillin, oxacillin, penicillin (G and V), ticarcillin, rifampin, tetracycline), antivirals (acyclovir, ddI, foscarnet, zidovudine, ribavirin, vidarabine monohydrate), antianginals (diltiazem, nifedipine, verapamil, erythritol

tetranitrate, isosorbide dinitrate, nitroglycerin (glyceryl trinitrate), pentaerythritol tetranitrate, anti-inflammatories (difluisal, ibuprofen, indomethacin, meclofenamate, mefenamic acid, naproxen, oxyphenbutazone, phenylbutazone, piroxicam, sulindac, tolmetin, aspirin, salicylates), antiprotozoans (chloraquine, hydroxychloraquine, metronidazole, quinine, meglumine antimonate), antirheumatics (penicillamine), narcotics (paregoric), opiates (codeine, heroin, methadone, morphine, opium), cardiac glycosides (deslanoside, digitoxin, digoxin, digitalin, digitalis), neuromuscular blockers (atracurium mesylate, gallamine triethiodide, hexafluorenium bromide, metrocurine iodide, pancurium bromide, succinylcholine chloride (suxamethionium chloride), tubocurarine chloride, vencuronium bromide), sedatives (amobarbital, amobarbital sodium, aprobarbital, butabarbital sodium, chloral hydrate, ethchlorvynol, ethinamate, flurazepam hydrochloride, glutethimide, methotrimeprazine hydrochloride, methyprylon, midazolam hydrochloride, paraldehyde, pentobarbital, pentobarbital sodium, secobarbital sodium, thiopental sodium), antineoplastics (methotrexate, fluorouracil, adriamycin, mitomycin, ansamitomycin, bleomycin, cysteine arabinoside, arabinosyl adenine, mercaptopolylysine, vincristine, busulfan, chlorambucil, azidothymidine, melphalan (e.g. PAM, L-PAM or phenylalanine mustard), mercaptopurine, mitotane, procarbazine hydrochloride, dactinomycin (actinomycin D), daunorubicin hydrochloride, dosorubicin hydrochloride, Taxol (RTM: paclitaxel), plicamycin (mithramycin), aminoglutethimide, estramustine phosphate sodium, flutamide, leuprolide acetate, megestrol acetate, tamoxifen citrate, testolactone, trilostane, amsacrine (m-AMSA), asparaginase, etoposide (VP-16), interferon alpha -2a, interferon alpha -2b, teniposide (VM-26), vinblastine sulfate (VLB), vincristine sulfate, hydroxyurea, procarbaxine or dacarbazine).

ADVANTAGE - The compositions provide improved delivery of compositions including drugs and genetic materials into cells. They provide for specific targeting and delivery of compounds to particular cells and increased targeting to the nuclei of targeted cells. They also allow delivery to cell lines that would be otherwise resistant to intracellular delivery and gene expression using other conventional means.

DESCRIPTION OF DRAWING(S) - Schematic representation of a targeted composition.

targeted composition 1
lipid coating 2
lipids 2A
halocarbon gas or liquid 3
genetic material 4
targeting ligand 5
lipid head group 6
tether 7
tether 7A
nuclear localization sequence 8
condensing agent. 9
Dwg.2/2

L128 ANSWER 48 OF 48 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1999-347616 [29] WPIDS
DOC. NO. CPI: C1999-102327
TITLE: DNA **vaccine** against tick-borne flaviviruses.
DERWENT CLASS: B04 D16
INVENTOR(S): SCHMALJOHN, C S
PATENT ASSIGNEE(S): (USSA) US ARMY MEDICAL RES & MATERIAL COMMAND; (USSA) US SEC OF ARMY
COUNTRY COUNT: 31
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 9926653	A1	19990603	(199929)*	EN	56

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW
EP 1047448 A1 20001102 (200056) EN
R: AT BE CH DE FI FR GB IT LI NL SE
US 6258788 B1 20010710 (200141)

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 9926653	A1	WO 1998-US25322	19981120
EP 1047448	A1	EP 1998-962851	19981120
		WO 1998-US25322	19981120
US 6258788	B1 Provisional	US 1997-65750P	19971120
		US 1998-197218	19981120

FILING DETAILS:

PATENT NO	KIND	PATENT NO
EP 1047448	A1 Based on	WO 9926653

PRIORITY APPLN. INFO: US 1997-65750P 19971120; US 1998-197218 19981120

AB WO 9926653 A UPAB: 19990723
NOVELTY - A new composition (A) comprises a carrier particle coated with a DNA sequence (I) comprising:
(i) a promoter operative in mammalian cells and
(ii) a coding region for a determinant of a tick-borne flavivirus (TBV) protein.
DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a method of inducing a protective **immune response** against TBV protein in a mammal by delivering (A) to the epidermis.
ACTIVITY - Antiviral.
Two doses (2 mu g, divided over two sites) were administered at an interval of 2 weeks. Ten **vaccinated** mice were challenged with virulent RSSE (Russian spring summer encephalitis) **virus** and 7 with virulant CEE **virus**. None of the **vaccinated** animals died contrast 15 of 17 non-**vaccinated** animals.
MECHANISM OF ACTION - Induction of a specific **immune response**.
USE - (A) are used in DNA **vaccines** to protect against viral tick-borne encephalitis. A **plasmid** containing cDNA encoding the premembrane/envelope (prM/E) protein of Central European encephalitis (CEE) **virus** was cloned into vector pWRG7077 and then delivered, on gold particles, to the abdominal epidermis of mice.
ADVANTAGE - The **vaccines** induce cross-protection (humoral, cell-mediated or mucosal) against both Russian spring summer and Central European encephalitis **viruses**. Epidermal delivery of (I) results in gene expression in immunologically active cells that are exfoliated after 15-30 days and are a natural focus of viral replication following tick bite. It requires only 1/1000 as much DNA as usual methods of genetic immunization and provides precise control over the quantity of DNA delivered. (A) are inherently safe, not painful to administer, and should not show adverse side effects. They can be produced without having to grow or use tick-borns flaviviruses.
DESCRIPTION OF DRAWING(S) - Map of the expression vector pWRG7077 containing a sequence encoding the premembrane/envelope proteins of a tick-borne encephalitis **virus**.
Dwg.1/7

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